

by **GEORGE I. TAUBENECK**

Stories of the Week
Gags of the Week
Jim Thorpe Story
Care and Feeding of Speakers
Can Your Boy Qualify?
Take It Easy, Ambitions Promoter!

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THE NEWSPAPER OF THE INDUSTRY

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See Steel Tight, Copper In Better Supply This Year

Peace Talks Fail To Stop Rising Demand for Steel, Other Critical Materials

DETROIT—The picture on critical materials for the balance of 1953, on the basis of a round-up of authoritative opinion in the past week is this: a possible tightening of the steel supply, and probable increase in the copper supply.

Availability of steel was said to be tighter last week than at any time in the past few years. A heavy flow of orders to the mills gave no indication of a slowing up in demand because of peace talk.

Steel companies were said to have been advised by Defense Administration authorities that military requirements for shell steel will be stepped up in the third quarter. The producers had been told that military set-asides for the third quarter would be no less than during the second quarter, and now it appears that they may go larger.

Automobile manufacturers are said to be putting on the pressure for more steel, with some trying to make arrangements for conversion steel, and the whole situation has led one authority to declare that the third quarter of 1953 might result in one of the most critical steel shortage periods in history.

There are two outside influences that can change the situation. A "real peace" in Korea might lead to an easing of military requirements. On the other side of the picture, agreements signed by the CIO Steelworkers union and the steel companies last year permit a re-opening of the contracts in May for negotiation of wage rates. Any work stoppages because of a labor dispute would naturally disrupt the whole steel picture.

The prediction of a probably more plentiful supply of copper is based on predictions that by the third quarter a considerable amount of foreign copper will reach the U. S. market. This, plus any easing in the requirements for defense purposes, might ease the copper supply situation considerably. However, brass mills have recently reported an increase in inquiry for brass discs used in artillery shell cases.

Wage negotiations between copper mining and refining companies and the unions will come up after June 30.

Stories of the Week

Fantastically successful author (and social lion) Michael Arlen retired early. He'd rather be listened to than be read, he admitted candidly. So he wrote no more after his "Green Hat" novel earned a jackpot.

After all, why should he write more fiction when admiring sycophants would wine-dine-and-house him in return for the pleasure of his happyfying presence?

Three decades after "The Green Hat" was published, Arlen was introduced, all-at-once, to a big cocktail party.

"Goodness!" he overheard a woman stammer, "is Michael Arlen still dead?"

Napoleon's escape from Elba, and his subsequent advance toward and across France, created these cumulative headlines in a Paris newspaper of that period:

"The Corsican Monster has landed in the Gulf of Juan."

"The cannibal is marching towards Grasse."

"The usurper has entered Grenoble."

"Bonaparte has entered Lyons."

"Napoleon is marching toward Fontainebleau."

"His Imperial Majesty is expected tomorrow."

Gags of the Week

Like all species that have refused to adapt, females are on the way to oblivion. It is inevitable that man, creator of the atom bomb and the mechanical brain, will eventually invent a more satisfactory something to replace women.—INEZ ROBB.

Probably the reason that God made woman last was that he didn't want any advice while creating man.

"My mother had to bake and fry all day over a wood stove to get the compliments my wife gathers after half an hour of thawing things out." *Kiwanis Magazine.*

Jim Thorpe Story

"Twas a despairingly hot and humid night in New York. Gasping, the writer took a corner stool at Al Schacht's air conditioned bar-and-restaurant.

A small dog occupied an adjacent stool. At the other end of his leash was a gracious woman. Turned out that she was Mrs. Al Schacht. From dogs the conversation turned to baseball and veered off toward football. Mrs. Schacht, it developed, was a "pro" football fan. Anecdotal punts were exchanged freely until Al himself got into the act.

"Best footballer ever was," he yakked. "Roomed with me on a trip. Thorpe, I mean. I mind the time I was sound asleep and the big Indian came in roaring drunk. He wanted me to get out of bed. I protested. Up he picks me like a baby, and holds me out the hotel window. Nine stories down I look.

"Down or out," Jim threatens.

"I got out fast."

Care and Feeding of Speakers

"A speaker—contrary to appearances—is of value. He enables you to sell \$3.50 dinners for \$5.00. He has several other worthwhile qualities, and should be treated with care, before, during, and after the ceremony.

"In picking a speaker, pick one from a long way away. A man gets more expert as he gets farther from home.

"To make landing your fish more certain, appeal to his cupidity or egotism. Tell him he will better his business by making himself heard by

(Concluded on Page 10, Column 1)

11th Educational Conference Opens In Seattle Apr. 24

SEATTLE—The first show of its kind to be held in the Pacific Northwest—the 11th Refrigeration and Air Conditioning Educational Exhibit and Conference—will be staged in Seattle's new Field Artillery Armory April 24-26.

The event will provide visitors an opportunity to inspect displays of more than 50 manufacturers, discuss problems with factory experts, and hear a series of talks each of the three days.

The exhibit and conference is being sponsored by the Refrigeration Equipment Manufacturers Association and the Refrigeration Service Engineers Society in cooperation with the Refrigeration & Air Conditioning Contractors Association and the Refrigeration & Air Conditioning Contractors Association and the Refrigeration & Air Conditioning Contractors Association.

(Concluded on Page 4, Column 2)

M-H Boosts Heating Control Prices 8%

MINNEAPOLIS — Minneapolis-Honeywell has increased prices on "a substantial number" of its heating controls by approximately 8%.

The company said that this action reflects, in part, the higher costs of materials and labor that it has experienced since 1950.

"We were able to absorb a large part of these higher costs through increased manufacturing efficiency and other means," a company statement declared. "However, the increase in those costs beyond our control finally reached the point where it was necessary to increase our selling prices."

California Tables Bill To Halt Equipment Leasing By Dairy Distributors

SACRAMENTO, Calif. — A bill which would have prevented distributors of milk and ice cream products from leasing or renting refrigeration equipment and services to their customers is reported to have been tabled by a committee of the California legislative assembly.

Henry Ely, executive secretary of the Refrigeration and Air Conditioning Contractors Association of Southern California, told the Livestock and Dairies Committee of the assembly that below-cost leasing or renting of refrigeration equipment is detrimental and unfair to the refrigeration industry.

Credit Group Plans 'Fight-to-the-Finish' On Gov't Controls

WASHINGTON, D. C.—A "fight-to-the-finish" policy against installment credit controls was adopted by the board of trustees of the National Foundation for Consumer Credit at its recent annual meeting in New York City.

The board took the action after the Senate Banking and Currency Committee voted a two-year stand-by authority for the Federal Reserve Board to control down-payments and pay-off periods on such articles as refrigerators, washing machines, furniture, automobiles, and personal-money borrowings.

John M. Otter, president of the foundation and vice president of Philco Corp., assailed the bill approved by the committee as a "re-

(Concluded on Page 21, Column 3)

RACCA To Gather Operating Data On Contractors

CHICAGO—Steps to compile and publish data of various operations pertaining to the refrigeration and air conditioning industry were taken by the board of directors of the Refrigeration & Air Conditioning Contractors Association at a two-day meeting held recently in Chattanooga.

Part of a program outlined for the ensuing year, the project is being undertaken "so that various members of the association will know costs of operation and other facts pertaining to their business, as they exist throughout the nation," RACCA explained.

The association also announced that it is backing the Detroit RACCA group in an effort to help the local preserve Detroit's refrigeration and air conditioning code.

(The Detroit group is opposing a proposal of the Automobile Manufacturers Association that the city refrigeration safety ordinance be amended so as to exclude automobile air conditioning systems from its coverage.)

(If the code is not amended, the automobile manufacturers will be

(Concluded on Back Page, Column 5)

Odor Research Conclave Opens In N.Y. Apr. 23

NEW YORK CITY—A two-day conference on "Basic Odor Research Correlation," under the joint sponsorship of the American Society of Heating & Ventilating Engineers and The New York Academy of Sciences, will be held on April 23 and 24 at the Barbizon-Plaza hotel here, the latter group announced.

The "odor problem" is of serious concern to chemists, physicists, experimental psychologists, as well as to industrial scientists working in the fields of cosmetics, tobacco, food, and the manufacture and transportation of chemical products, the announcement said.

In arranging this conference, the sponsors will bring together the outstanding investigators in academic and industrial laboratories, working in these special fields, to explore jointly the present status and recent developments, with the hope that a full exchange of knowledge and opinions with their colleagues in allied fields will benefit all those concerned with the basic odor problem.

Dr. Albert R. Behnke, U. S. Navy, will preside as general chairman. Introductory remarks by Thomas R. Urdahl, consulting engineer, Washington, D. C., will present "The Odor Problem in Industry and Sciences."

(Concluded on Back Page, Column 3)

NEMA Refrigerator Sales Rise 35% In February

NEW YORK CITY—A 35% gain in refrigerator sales during February of 1952 was scored by the 17 companies reporting to the National Electrical Manufacturers Association.

These firms sold a total of 377,605 units last February. Of these, 10,210 units went to Canada and 15,789 to other foreign countries. Canadian sales were 156% higher than last year and other foreign sales were up 11%.

For the first two months of 1953, the NEMA firms sold 724,652 units, 30% more than in the same two

(Concluded on Page 21, Column 4)

Crosley Introduces Home Laundry Line To Distributors

WASHINGTON, D. C.—A seven-model line of washers and dryers, a 13-cu. ft. upright freezer, and a 30-in. electric range in two models were introduced by Crosley Div., Avco Mfg. Corp., at a distributor meeting held here last week.

Crosley said introduction of the home laundry equipment, which includes three automatic washers, one portable semi-automatic washer, and three automatic dryers, gives it a complete line of major household appliances and electronic equipment.

The laundry equipment consists of two "roto-tumble-action" washers, the "Customatic" at \$319.95 and the "Deluxomatic" at \$299.95; two agitator-action washers, the "Supermatic" at \$239.95 and the "Rollamatic" at \$199.95; an electric dryer at \$239.95; and two gas dryers at \$279.95 and \$299.95.

The electric range models are priced at \$249.95 and \$199.95, and the freezer at \$469.95.

All prices are suggested retail.

A fully-automatic washer, the Customatic (CWF) will handle 9 lbs. of clothes. Chief feature is the Crosley automatic "heatkeeper," which maintains the temperature of the water in the tub during the washing cycle.

The Crosley-designed "Guide-A-

(Concluded on Page 21, Column 1)

'Freezer Week' Makes Seattle Residents Want To Own One

SEATTLE—Residents of this area should now be extremely freezer-conscious.

April 12-18 was "Home Freezer Week" here, by official proclamation of Mayor Allan Pomeroy, and the public was told the product story through freezer shows at the Civic Auditorium, displays, demonstrations, promotions, advertising, and a special newspaper section.

In his proclamation, Mayor Pomeroy called attention to the abundance of foods available for year-round enjoyment through ownership of a home freezer. He also cited the savings in both time and money that a freezer makes possible.

"Value and convenience of these home appliances should be stressed," the mayor said, "so that more of our people may take advantage of the health-giving foods made continually available by these modern units."

Appliance merchants throughout the city featured freezer displays and demonstrations in the wake of newspaper advertising and sales promotions.

(Concluded on Back Page, Column 3)

Thor To Make Wall Ranges In Leeson Products Plant

CHICAGO—Thor Corp., which has acquired Leeson Steel Products Corp., manufacturer of "Presteline" electric ranges, will operate Leeson as a subsidiary to produce a new kind of "wall range" under the Thor name, it has been announced by John R. Hurley, Thor's president.

The new Thor range will be built in two units, with the oven to be installed in a wall or cabinet and the other cooking unit installed independently wherever a housewife desires.

Thor Corp., which a year ago produced only home laundry equipment, is now offering a line of home freezers and is reported planning to introduce a line of household refrigerators.

Record Orders Raise '53 Chrysler Airtemp Goals

DAYTON—Airtemp Div. of Chrysler Corp. announced that 1953 production of air conditioning units is scheduled to be 50% greater than 1952 output.

Due to record-breaking shipments in the first quarter of 1953 and an unprecedented number of orders for all types of air conditioners, Airtemp found it necessary to double its planned 25% increase to meet the present demand, stated J. F. Knoff, vice president and general sales manager.

Knoff disclosed that shipments of "packaged" air conditioning units—not including room air conditioners—

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D. C. McCoy, (left) past president of the Dayton Amateur Radio Association, and Frank Schwab, (right) president of the association, examine a Frigidaire electric dehumidifier during the recent "Hamvention" in Dayton. The dehumidifier is recommended for keeping moisture out of broadcasting equipment.

Frigidaire Dehumidifier Designed To Safeguard 'Ham' Radio Equipment

DAYTON—A compact, economical electric dehumidifier, designed to safeguard the delicate and expensive contents of radio ham shacks was part of new equipment shown to more than 1,000 amateur radio enthusiasts during Dayton's 1953 'Hamvention,' held recently.

Sponsoring organization for the

meeting was the Dayton Amateur Radio Association.

Amateur radio 'Hams' from across the country had an opportunity to inspect Frigidaire's lightweight self-contained dehumidifier, which will reduce the humidity of an enclosed space up to 8,000 cu. ft. in size, according to the company.

D. C. McCoy (W8DG), who is with Frigidaire, and is a past president of the Dayton Amateur Radio Association, pointed out that if the radio shack is located in the basement, moisture condensation can cause the loss of transformers, bleeders, and voltage-dropping resistors in the transmitter. Summer humidity also causes the receiver to get off calibration and contributes to the failure of components.

He also pointed out that excessive moisture will cause tools to rust and corrode, radio libraries to mold, and wall linings of the basement radio shack to warp.

Carrier Atlanta Acquires Branch of Mingleddorff's

AUGUSTA, Ga.—Announcement is made that Carrier Atlanta Corp., with home offices in Atlanta, has assumed ownership of all properties in Augusta formerly owned by Mingleddorff's, Inc.

According to President L. L. Barnes of Carrier Atlanta, the same personnel which operated the former dealership will continue operation under the new management.

Meredith Amphlett, branch manager of Mingleddorff's, will continue in the same capacity for Carrier Atlanta, it was stated.

Heating, Piping Contractors Oppose Proposed Revisions In Seattle Safety Code

SEATTLE, Wash.—Spokesmen for the Heating, Piping & Air Conditioning Contractors Association declare that proposed revisions in Seattle mechanical refrigeration safety code discriminate against the heating, plumbing, and ventilating industries.

The criticisms of the suggested revisions were made at a recent City Council Public Safety hearing.

The committee authorized its chairman, Clarence F. Massart, to name a citizens' committee to study the situation.

Republic Steel Enters Kitchen Cabinet Field

NEW YORK CITY—Republic Steel Co. has announced its entry into the kitchen cabinet field with what it calls the broadest selection of cabinet sizes and styles in the industry.

Republic said it will offer 17 sizes and styles of adjustable shelf wall cabinets and 34 floor cabinets.

Special features include a device that will enable the wall cabinets to be easily shifted to suit tall or short women, and nylon drawer slides.

Republic is claimed to be the only company in the kitchen cabinet field that controls operations from the raw iron ore to making the steel, rolling it into sheets and strips, and then manufacturing the finished product.

The kitchen cabinet line is made by the firm's Berger Mfg. Div.

Expect 7,500 At Philco's Midsummer Atlantic City Meeting

PHILADELPHIA — The midsummer convention of Philco Corp., to be held in Atlantic City June 7 to 10, will attract 7,500 television, radio, and appliance dealers from every state, Hawaii, and Alaska, it was reported by Ray B. George, vice president in charge of merchandising.

The Philco convention will be the largest meeting of its kind ever sponsored by one company, George said. In 1950, Philco held a similar record setting convention attended by 5,000 dealers, he stated.

The business sessions will be held in the Atlantic City Convention Hall. An international flavor will be added to the meeting as Philco International Co. bring representatives of its distributors throughout the world to the meeting.

The dealers, all guests of Philco, will preview the company's newest television and radio sets as well as electrical home appliances that may be introduced at the time. The dealers will be informed of new merchandising and promotional programs that will back up the new products.

The Philco story will be told by top executives of the company, including William Balderston, president; James H. Carmine, executive vice president; Larry F. Hardy, president of TV-Radio Div.; John M. Otter, vice president and general manager of refrigeration; Frederick D. Ogilby, vice president and general manager of television; William H. Chaffee, vice president and general manager of radio; John F. Gilligan, vice president in charge of advertising; James M. Skinner, Jr., vice president in charge of distribution; George, and others.

George said many distributors are planning to identify their groups by "dressing up" in regional costumes.

In addition to the business sessions, Philco has planned entertainment for the group. Boardwalk hotels have been signed up to handle the dealer convention and all accommodations have now been cleared.

Puckett & Brown Adds Frigidaire

COLUMBUS, Miss. — Puckett & Brown has been appointed Frigidaire dealer in Columbus.



SIDNEY G. STEVENS FRANK B. GRAY

Sidney G. Stevens was recently named manager of marketing for the General Electric specialty refrigeration department. Frank B. Gray was also appointed manager of sales for room air conditioners.

Norge Uses Hidden Serial Numbers To Help Trace Appliances

CORONADO, Calif. — Norge has been stamping serial numbers on inaccessible parts of its major appliances for several months, George P. F. Smith, president of the Norge Div., Borg-Warner Corp., revealed here.

This is being done, he indicated, in case it becomes necessary to trace appliances that have been transshipped or dumped into areas for which they were not intended.

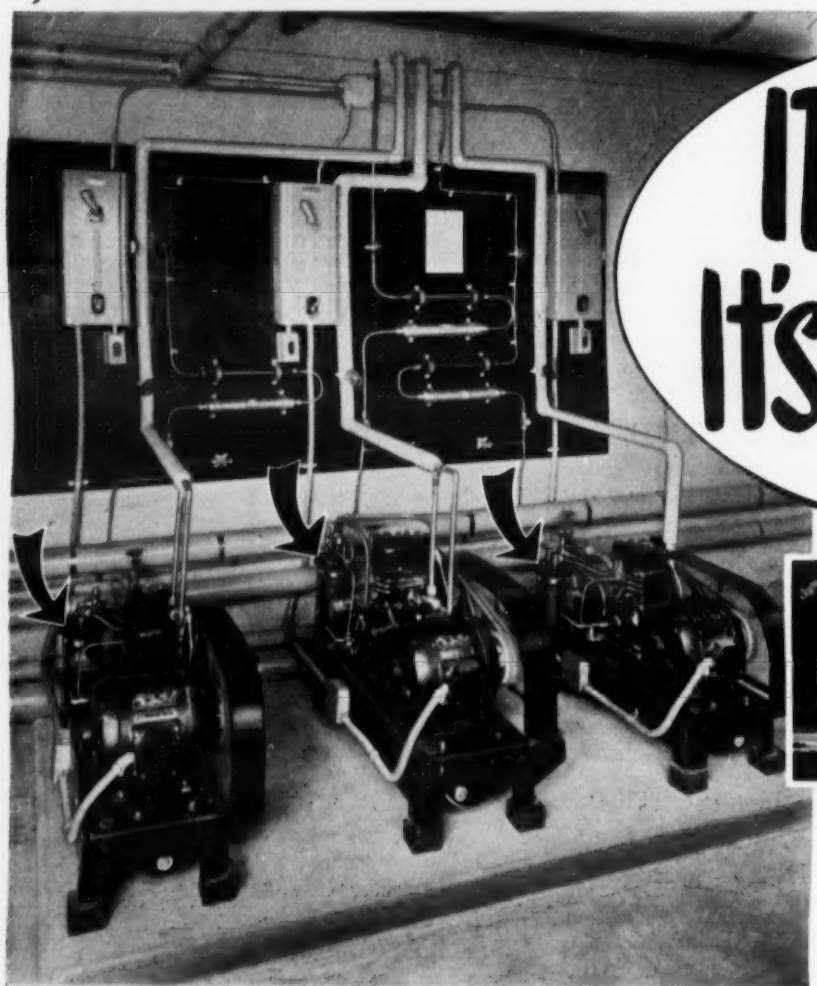
Purpose is to protect legitimate dealers and distributors from others who sell appliances at cut prices after removing the conventional serial numbers.

H. L. Clary, Norge vice president in charge of sales, declared that Norge has had "relatively little trouble with the problem, compared with some manufacturers."

Fire Hits Harvey Electric, Damage Fixed at \$12,000

EBENSBURG, Pa.—The Harvey Electric Co. building at 812 William Penn Highway was damaged extensively by fire recently, with loss estimated by firemen at \$12,000.

Damage to the structure was estimated at \$7,000 and to the contents at \$5,000. Stocks of new appliances were destroyed in addition to a number of items left at the shop for repair.



**IT'S NEW!
It's modern!**



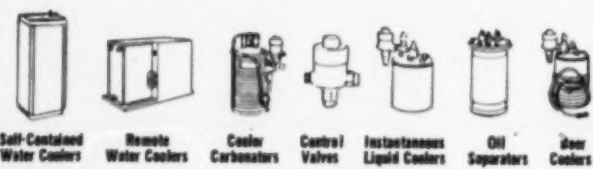
One of the most modern schools in America is the new Clara Bryant Junior High School in Dearborn, Michigan.

Three condensing units supply refrigeration needs for the school's cafeteria and drinking water fountains throughout the building.

★ **TEMPRITE Oil Separators are on the job!**

- ★ Temprite Oil Separators keep oil in the compressor and away from the evaporator and condenser walls.
- ★ Oil-free coils permit the refrigerant to boil at its true boiling point in evaporator, condensing at the proper temperature in the condenser.
- ★ Lower temperatures easily reached and compressor operating time held to a minimum. Power and water consumption is held to a minimum.
- ★ Compressor crank case oil level remains constant, eliminating danger of scored compressor parts.

Temprite



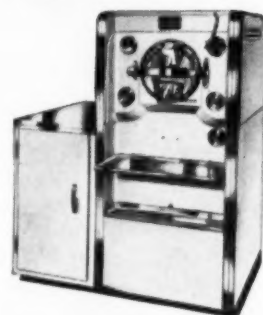
PRODUCTS CORPORATION ★ BIRMINGHAM, MICHIGAN

TEMPRITE PRODUCTS CORP.
P.O. Box 72-A, Birmingham, Michigan

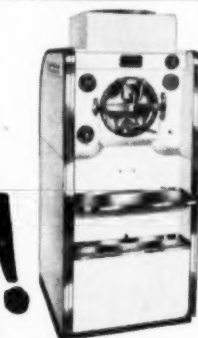
- ☐ Please send me complete data on Temprite Oil Separators
- ☐ Ask your representative to call

Name _____
Address _____ Zone _____
City _____ State _____

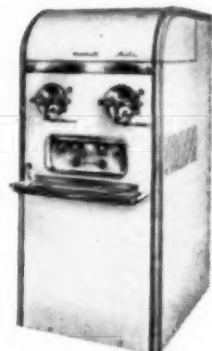
How to make big money!



Mills All-Purpose Pump Model with refrigerated Mix Cabinet. Cabinet holds two 10 gallon mix containers. Mix fed automatically to freezer barrel. Makes all continuous custards and batch ice creams. Capacity up to 30 gallons of product per hour.



Mills Hopper Model (pumpless) makes both continuous soft frozen products and regular batch ice cream. Refrigerated Hopper holds 4 gallons of mix. Capacity up to 30 gallons of product per hour.



Mills Masterpiece Twin-Head Freezer for producing wonderful continuous flavored custards. Each barrel operates independently for perfect flavored product production. Capacity 7 to 10 gallons of product per hour. Available in floor and counter models.

● Mills Freezers are specifically tailored to fit your selling needs. Three models cover the entire field! The Mills Line is easy to stock, easy on the pocketbook, easy to install and EASY TO SELL. Your discounts assure you the biggest, sweetest profits you've ever seen, — yet Mills selling prices give you a tremendous competitive advantage over every freezer on the market!

And Mills Freezers provide your customers with the means to make big profits, and pay for their equipment quickly. No other freezer offers such clean, modern beauty, simplicity of operation, durability, and such amazing high quality at so low a price.

Mills is the only Freezer in the U.S.A. with 20 years of uninterrupted successful manufacture and sales to recommend it! Now with a booming soft products multi-flavored trend to back you, and the biggest Mills promotion in years including Saturday Evening Post and a long list of trade publications advertising, you can MAKE BIG MONEY! Write Mills Freezer Division NOW! Get the full details of choice territories.

be a MILLS distributor!

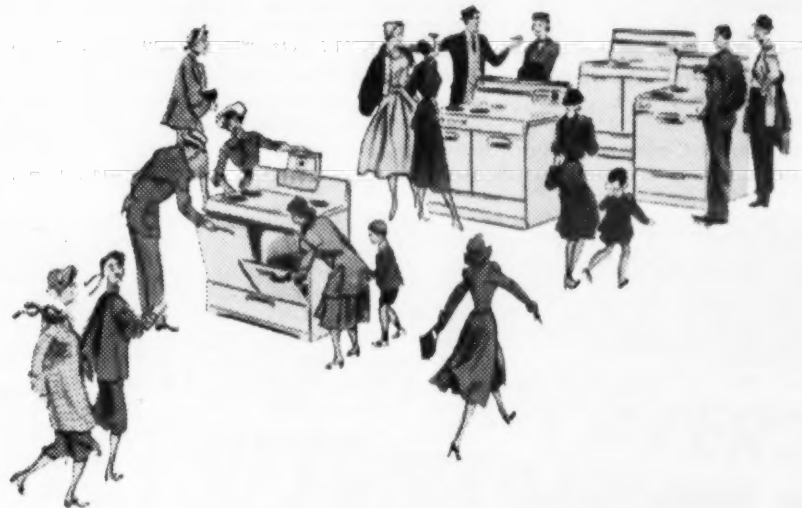
MILLS INDUSTRIES, Inc.
4102 FULLERTON AVENUE • CHICAGO 39, ILLINOIS

Frigidaire Dealers are now showing the biggest line of Electric Ranges in all Frigidaire history!

12 new models . . . in 3 newly designed, feature-packed series . . . DeLuxe, "Thrifty-30" and Master . . . offer dealers greater profit opportunities than ever before!



LOOK! AMERICA'S MOST BEAUTIFUL ELECTRIC RANGE!



Electric range customers who visit their Frigidaire Dealers to see the 1953 Frigidaire Ranges need go no further! For they'll have a *complete* line to choose from! There are new Frigidaire Ranges for large families or small; for big or little kitchens; for modest or generous budgets. And customers can take their choice of 21, 30 and 40-inch sizes; "Wonder Oven" and "Thrifty-30" models, double and single-oven types; switches on front or back panel; divided top or cooking units together. And the selling features — spearheaded by the outstanding new Quick-Clean Oven — continue to prove Frigidaire leadership in the electric range business.

♦ **Frigidaire Model RS-70.** Two-oven luxury for folks who want the very best range money can buy . . . and the most beautiful! Both ovens have the new Quick-Clean feature. Everything slides out for easy cleaning — shelves, guides, drip tray . . . even the heating units.



LOOK! NEW DELUXE MODEL WITH "WONDER OVEN" QUICK-CLEAN FEATURE!



Frigidaire Model RS-60. Has the wonderful "Wonder Oven" that bakes, roasts and broils same time, same oven! Becomes two ovens or one extra-large oven in a jiffy! Has new Quick-Clean Oven, Radiantube Surface Units, Cook-Master Oven Clock Control, Oven Signal-Lights, Full-width fluorescent Cooking-Top Lamp, two appliance outlets, one clock-controlled.



LOOK! WORLD-FAMOUS "THRIFTY-30" IN A BRAND NEW MODEL!



Frigidaire Model RS-38. Biggest-selling little range in the world! Only 30" wide, yet Giant Oven goes clear across. Now with new features including Cook-Master Oven Clock Control, Surface Signal-Lights, Automatic Appliance Outlet, 2-Speed Electric Time-Signal, fluorescent Cooking-Top Lamp and a host of other big range features usually found on costlier models.



LOOK! NEW LOW PRICE 2-OVEN MASTER MODEL!



Frigidaire Model RS-28. Genuine Frigidaire 2-Oven Electric Range that sells at the price of many single-oven models! The RS-28 is a new-comer to the line this year and features 2 full-size Even-Heat Ovens, both with Simpli-Matic Oven Controls! Has most of the quality features for which every single Frigidaire Electric Range in the line is noted.

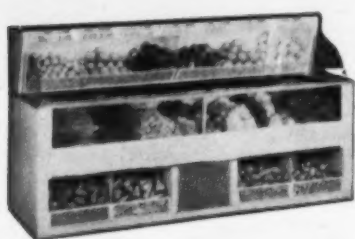
FRIGIDAIRE Appliances BUILT AND BACKED BY GENERAL MOTORS

Today's Best Seller!

Cunningham

Frozen Food
Dairy Products
Ice Cream
Fresh Vegetables

Display Cabinets



Pictured, our new 1953 Model, 8 foot, open type, Fresh Vegetable Cabinet.

Cunningham Cabinets
are

Designed and priced for the market
where you can make sales every day.

Write for our 1953 Catalog and the
"Cunningham Sales Plan."

Cunningham Products Company
8790 Grinnell • Detroit 13, Mich.

Educational Conference In Seattle--

(Concluded from Page 1, Column 2)
refrigeration Equipment Wholesalers Association. Fay Snyder is general conference chairman.

A highlight of the entertainment program will be a banquet and floor show Saturday night, April 25, put on by the Western International Association of RSES, host organization, at the New Washington hotel. On the preceding evening, WIA will hold its annual convention at the New Washington.

Service engineers attending the show will have an opportunity to win prizes to be awarded by REWA to the best three entries in a contest. They may vote on displays and state in 25 words or less why the exhibit they have selected is, in their opinion, the most educational.

Activities will get under way Thursday evening, April 23, with a get-acquainted party at the New Washington. Program for the next three days follows:

FRIDAY, APRIL 24

9 a.m.—"Information Please." Advice on problems by a board of experts.

10 a.m.—"Let's Talk About Driers," John B. Bopp, chief chemist, Refrigeration Div., Ansul Chemical Co.

11 a.m.—"The Business Outlook," Minor Baker, Economic Research Dept., Seattle First National Bank. Noon—"Job Design and the Service Engineer," Richard M. Stern, mechanical engineer.

1 to 5 and 7 to 10 p.m.—Educational exhibits open.
7 p.m.—Annual convention of West-

ern International Association of RSES. Election of Officers. RSES Hospitality Room, New Washington.

SATURDAY, APRIL 25

9 a.m.—"Information Please."

10 a.m.—"Operating Characteristics of Reflective Insulation," Edward Simons, consulting engineer.

11 a.m.—"Blower Coil Design and Selection for Proper Humidity Control," Dan D. Wile, chief engineer, Refrigeration Engineering, Inc.

1 to 5 p.m.—Educational exhibits open.

5 p.m.—Cocktail hour. Flamingo Room, New Washington hotel.

7 p.m.—Annual banquet, Western International Association, RSES. Windsor Room, New Washington hotel. Everyone invited.

SUNDAY, APRIL 26

9 a.m.—"Information Please."

10 a.m.—"Removing Moisture from Refrigerating Machines In the Field," Frank Y. Carter, manager, Refrigeration Div., Detroit Controls Corp.

11 a.m.—"The Use of the Suction Pressure Recording Gage In Diagnosing and Analyzing Service Problems," John H. Spence, service manager, Hussmann Refrigeration, Inc.

1 to 4 p.m.—Educational exhibits open.

Smart Shop Air Conditions

ROCK HILL, S. C.—The Smart Shop, Main St. fashion center, has installed Carrier air conditioning and heating equipment. Thomas Heating & Air Conditioning Co., this city, had the contract.

G-E Adds New Products to '53 Line, Narrow Refrigerator, Range Offer Deluxe Features



SPACEMAKER-36 (model J-364) includes three storage drawers, four surface units, full-size oven in 36-in. width.



SPACEMAKER-24 (model J-245) has four surface units, appliance outlet, automatic oven timer in 24-in. width.

LOUISVILLE, Ky. — New low-priced, 24 and 36-in. ranges, designed to conserve space but still provide the complete cooking services and large capacity of full-size ranges, have been added to the 1953 General Electric line.

Though only two and three feet wide, the new ranges have most of the features, including push-button controls, that are found in full-size deluxe ranges, says J. R. Poteat, general manager of the range and water heater department.

Oven Capacity Comparable To 40-In. Range

Oven capacity for the new ranges is comparable to that offered by the largest 40-in. ranges. Proportioned to minimize waste space and to provide maximum shelf area, the oven measures 21 in. wide, 18 in. deep, and 15 in. high.

Other oven features common to both range sizes are: a removable no-stain oven vent, two lock-stop shelves adjustable to 12 different positions, porcelain enamel broiler pan and chrome-finished broiler rack, removable broil and bake units, with enclosed heating elements, front-serviced oven terminals, a cycling light to indicate when the oven is at correct cooking temperature, and a counter-balanced oven door.

For top-of-the-range cooking, there are two 6-in. high-speed units; an 8-in. high-speed unit; and a 6-in. 1600 watt, extra-high-speed unit in the right rear position. A three-unit 24-in. range model is also available, with right front unit omitted. For easy cleaning, removable drip trays are provided on all models.

Push Button Controls

Push buttons permit selection of five different cooking heats for each surface unit. To visually indicate that a unit has been turned on, a red dot, impressed in the front side of the "OFF" button, becomes visible when any heat selection button is depressed. In some models this is supplemented by a master indicator light which glows red as long as any surface unit is in operation.

A new convenience feature of the narrow-width ranges is a combined fuse receptacle and duplex appliance outlet mounted on the right hand side of the back splash panel. The fuse, protected by a labeled, hinged cover, can be quickly located and easily changed by the housewife. In range models where the lamp and timer unit is included, one of the



FULL-WIDTH evaporator, vegetable drawers, door shelves are a few of the deluxe features of the General Electric refrigerator model LC-70 which retails for \$279.95. All of this in a unit measuring 2 ft. wide.

appliance outlets is timer-controlled.

Storage space in the 24-in. ranges is provided by a one-piece base drawer with a capacity of 1½ cu. ft. The drawer is mounted on six 1-in. nylon rollers and comes to a stop against four rubber bumpers.

The 36-in. ranges have a similar base drawer, another smaller drawer alongside it and a partitioned drawer beside the oven for the vertical storage of cookie sheets and pot and pan lids.

Recommended retail prices follow:

24-in. Ranges

Model J-245\$229.95
Spacemaker-24 range with 4 surface cooking units, including one extra-high-speed unit; lamp and automatic oven timer; timed appliance outlet; storage drawer; master surface indicator light; and oven cycling light.

Model J-244\$194.95
Same as J-245 less lamp and automatic oven timer unit, which is available as an accessory. Appliance outlet is not timed.

Model J-242\$179.95
Economy, 3-surface-unit version of J-244.

36-in. Ranges

Model J-364\$254.95
Spacemaker-36 range with 4 surface cooking units, including one extra-high-speed unit; lamp and automatic oven timer; timed appliance outlet; three storage drawers; master surface indicator light; and oven cycling light.

Model J-362\$219.95
Same as J-364 less lamp and oven timer. Appliance outlet is not timed.

Model J-361\$199.95
Same as J-362 less two base storage drawers.

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HUNDREDS OF ITEMS...

- BEER & SODA SYSTEMS
- WALK-IN BOXES
- REACH-IN BOXES
- DAIRY & BEVERAGE WALL CASES
- FREEZERS, Upright, Chest
- STAINLESS STEEL EQUIPMENT
- KITCHEN & TAVERN SINKS
- BOTTLE COOLERS
- ICE CUBE MAKERS
- AIR CONDITIONING

GET THE HABIT, IT WILL PAY TO CALL...

FRIGITEMP CORP.

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Outstanding Opportunity!

200 TON AIR CONDITIONING INSTALLATION

At a Fraction of Original Cost!

A complete workable system comprised of: 2—100 ton York compressor units; 200 ton York Dehumidifier; 200 ton York Evaporative Condenser; 2—100 H.P.C. & H. Starters; Wetting-house Preheaters; Set of Trane Preheat Coils; 10 Rheostat Coils; Bryant 11,100 ft. Steam Boiler gas fired; 40,000 cfm Buffalo Forge Fan; Assembled Control Panel; Skidmore Condensate Pump; complete Minneapolis-Honeywell Controls for Pneumatic System.

Actual running time on this equipment is less than 20 months. A complete job record can be supplied by Equipment Manufacturer. This system is as good as new and will stand rigid inspection.

For Additional Information Contact:

C. J. O'HERON

336 Midland Bank Bldg.

Minneapolis, Minn.

Phone: Lincoln 7561

No. 1 IMPORTANCE

Regardless of the UNIT You Buy...

Be Sure it has a **CLEANABLE** Condenser



Now that almost all leading manufacturers are recognizing the demand for a cleanability feature in their units—you needn't settle for anything less than a CLEANABLE water-cooled condenser. For regardless of water conditions or length of service, you can always count on restoring new-unit efficiency by the simple use of a spiral cleaning tool in these new HM Cleanable models. The tool cleans them mechanically—thoroughly removing ALL the corrosive material that accumulates on the water tube interiors. Remember, too, in all sizes, economical performance is now enhanced by low initial purchase cost, made possible by the huge productive capacity at the new Halstead & Mitchell condenser plant.

Seamless Copper Tubes
Brass Headers Machined & Brazed

Capacities—1/3 thru 25 H. P.
All Water-cooled, Double tube, Counter-flow

HM

Halstead & Mitchell



New Accessories

Base Cabinet, Cart, Legs on Casters Make 'Wonderbar' Versatile

EVANSVILLE, Ind.—Three new accessories — a vehicle called the "Wondercart," key-locked base cabinets for storage, and smartly-styled wooden legs on casters—have been brought out by Servel, Inc. as additions to its "Wonderbar" line and are now available to the public.

Neal Schuman, sales manager of the Wonderbar Div. of the company, stressed the added versatility that the new accessories gave to the portable electric refrigerette.

"The Wonderbar was originally introduced by Servel to widen the uses of refrigeration by bringing it out of the kitchen," said Schuman. "Now these additional accessories add still further to its value."

Schuman described the Wondercart as a "tricycle landing gear" for the refrigerette. Coppertone or chrome tubing cradles the Wonderbar on chrome or coppertone disk-and-rubber wheels for easy maneuvering from room to room. The "trike" version is topped by a tray for easy serving. Wicker wrapping on the push bar is an added style note. The Wondercart is priced at \$49.50.

The key-locked base cabinet combines furniture styling with added storage space. It comes in two styles: the light oak version has a modern flavor while its mahogany counterpart is traditional to harmonize with the dark refrigerette. Each is \$39.50.

The new wooden leg bases on casters are finished in blond, mahogany, and white. They hold the Wonderbar at a convenient height, add to its portability, and blend with its styling. They cost \$10.

JUST ASK US!

Turn to "What's New" Page for useful information on new products.



... IT'S THE **REVCO** Chill Chest FOOD FREEZER

● Yes, more and more dealers are joining the fast growing Revco family and cashing in with the line that offers more sales features.

Faster Freezing



NEW LOW TEMPERATURE REFRIGERATION SYSTEM

NO FAN NOISE... NO CONDENSER CLEANING

Write For Distributor's Name
REVCO, INC. • DEERFIELD, MICH.



ABOVE: Key-locked storage cabinet on which the "Wonderbar" rests is light oak with a modern look to harmonize with the blond Wonderbar.

LEFT: Designed as smart furniture to bring refrigeration out of the kitchen, the Wonderbar with Wondercart, now can be wheeled from room to room. Comes in chrome or coppertone tubular steel.

Bush Mfg. Opens Warehouse, Branch Office In Chicago

WEST HARTFORD, Conn.—The Bush Mfg. Co. here, manufacturers of air conditioning, refrigeration and heating products, and the Heat-X-Changer Co. have announced the opening of new warehouse and branch office facilities in Chicago.

Comprising 6,250 sq. ft. of floor space, the new warehouse is located at 1455 W. Congress St. It is situated in an easily accessible area, convenient to new through highways, and includes a large loading platform, the companies said. The office and warehouse will be used to service Bush and Heat-X customers.

In charge of the office force and sales engineers in the field will be J. K. Campbell, Midwest district manager for Bush and Heat-X.

McNulty Files Business Name

BUFFALO—A business name has been filed in the Erie County clerk's office for McNulty Furniture & Appliances.

Paragon Plans Big 'De-frost-it' Promotion

TWO RIVERS, Wis.—What is described as "The largest and most complete advertising and merchandising program ever used to promote 'de-frost-it,'" has been announced by Paragon Electric Co. here.

In order to cover every installation requirement, Paragon recently added a second model of its "de-frost-it." The merchandising program is keyed to the "Thrifty-Twin" theme used in all national, trade paper, and sales promotion campaigns.

The program includes four separate and complete seasonal promotions, in addition to a sales training program.

Developed to train retail sales personnel in the fundamentals of selling the "de-frost-it," the program involves a cartoon-type booklet which details the adventures of "Frosty, the Ailing Refrigerator." The program is sparked by an incentive based on free gifts of over \$36,000 worth of Ciro's "Danger" perfume.

A new counter display card in full color is available at no cost.

7½ Hp. Limit Put on Air Conditioning Motors for Omaha Residential Units

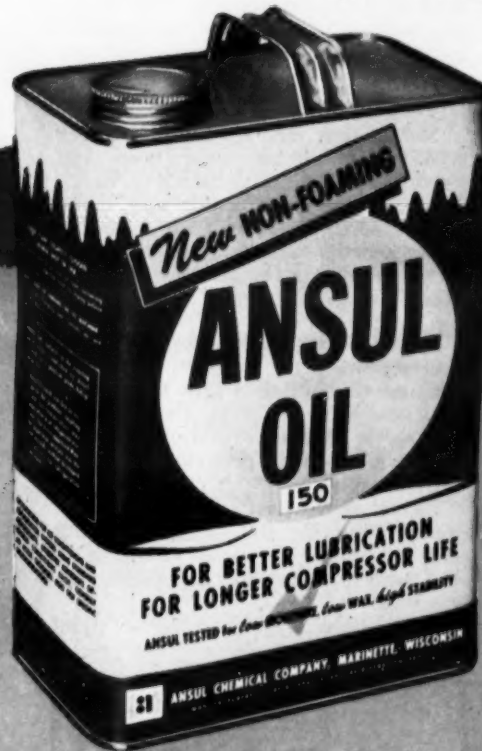
OMAHA, Neb.—Increasing interest among home owners of this area in air conditioning has prompted the Omaha Public Power District to revise its regulations concerning the size of installations.

The new rule, which already has been placed in effect, removes a former 10-hp. limitation on motors and places the new, upper limit at 7½ hp.

Limit under the old rule for air conditioning motors was a total of 10 hp. for any given residence, however, while the new rule places no limit on the number of 7½-hp. motors that may be installed in a dwelling, according to the regulation.

Fay E. Smith, general manager for OPD, explained that the reason for the change was that the bigger motors cause too much strain on the power transmission system at the moment when the air conditioner is turned on.

NOW... MORE THAN EVER...
THE FINEST REFRIGERATION OIL
...at any price!



ANSUL NON-FOAMING REFRIGERATION OIL

NOW... MORE THAN EVER... ANSUL is the FINEST REFRIGERATION OIL at any price! In addition to the features which have made it outstanding in the past... High Lubricity, High Stability, Low Moisture and Low Wax... a vital improvement has been made. ANSUL OIL IS NOW PROCESSED TO PROVIDE NON-FOAMING CHARACTERISTICS... a distinct advancement in the science of refrigeration lubrication.

ANSUL is the LARGEST SELLING REFRIGERATION OIL sold through Refrigeration Wholesalers... EXCLUSIVELY.



Write for more complete information on ANSUL NON-FOAMING REFRIGERATION OIL. ANSUL Technical Bulletins are also available to Refrigeration Service Engineers through Ansul Wholesalers who welcome every opportunity to serve the men of the industry.



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Chemical Company

REFRIGERATION DIVISION • MARINETTE, WISCONSIN

MANUFACTURERS OF REFRIGERANTS AND REFRIGERATION PRODUCTS, INDUSTRIAL CHEMICALS, SPECIAL CHEMICALS AND DRY CHEMICAL FIRE EXTINGUISHERS — DISTRIBUTORS OF DU PONT "FREON" REFRIGERANTS

Utility Spokesman Says Power Companies Should Take Lead In Building 'Coordinated, Cooperative' Appliance Sales Plans

CHICAGO—A suggestion that all segments of the electrical industry unite in an aggressive sales program was put forth at the 19th annual sales conference of the Edison Electric Institute.

Opening general sessions of the conference, J. Reed Hartman, chairman of EEI's Commercial Div. General Committee, said such a program could reverse the predicted short decline in demand for consumer durable goods insofar as the electrical industry is concerned.

Economic Conditions Made All-Out Selling Difficult

Discussing some of the broad thinking and plans of the Commercial Div., Hartman pointed out that "war, threats of wars, problems of capacity, and shortages of material have made all-out selling programs either impossible or inadvisable for the past 13 years."

However, he said, conditions now seem to point to a need for an aggressive selling program in the immediate future.

"While world tension resulting from the clash of two diametrically-opposed ideologies will continue, recent events appear to indicate that World War III will not develop within the next few years," Hartman stated.

"A construction program of our companies, while delayed by shortages of material, will provide a substantial amount of additional generating capacity by the end of 1953.

Personal Income To Stay High

"The economists appear to agree that there will be a decline in the FRB index beginning in late 1953 or early 1954 and continuing throughout 1955 and 1956. The same economists predict that this decline will not be severe and that personal, disposable income will remain at a high level.

"If these conditions develop as predicted, we will have an excess of capacity and a need for increased gross revenue to service the additional investment in generating capacity.

"The economists predict a short decline in the demand for consumer durable goods because of the decline in the rate of family formation. When we examine the low saturation of many appliances and consider the prediction of a high level of disposable income, the challenge is clear."

Through united effort, Hartman said, the industry could maintain the strength of the manufacturing components, tend to minimize the effect of the decline in general business, maintain the earnings of the electric utilities, defer or avoid the necessity of rate increases, and realize improvement in customer goodwill.

Hartman noted that a conference was held with the National Electrical Manufacturers Association last January and a joint committee appointed to investigate the possibilities of greater cooperation between EEI and NEMA, with increased sales as an objective.

New sales methods utilizing the mass approach must be developed, Hartman stressed, adding that the sales tools produced by the EEI committees will prove most helpful.

"The success of any national program produced by EEI, by NEMA, or by joint bureaus or councils depends entirely upon their use at the local level," he continued. "It is, therefore, the responsibility of the utilities to take the leadership in the local community.

Leagues, Assns. Provide Means for Action

"Where active leagues or associations exist, they will provide an excellent means for bringing about united and concerted action by all components of the electrical industry. Where leagues do not exist, consideration should be given to the formation of a league or a committee to accomplish this result.

"I believe that the manufacturers, realizing that they must assume a greater part of the burden of developing the market for any appliance, will find ways and means to encourage the distributors of their products to devote a portion of their effort and their funds to the expansion of the market, for which they will then compete."

The importance of industry cooperation was stressed, too, by B. L. England, EEI president, in another general sessions talk.

Limitless Expansion

Noting that "the sales job is bigger today than it has ever been and promises to go on expanding limitlessly," he said the "size and significance of this task call for the most whole-hearted and imaginative cooperation among the salesmen of electrical living, from all segments of our industry and on all levels."

England said the activities of all contributors to electric service "should be developed into a harmonious and effective structure in which the sales efforts of each fit into or complement the programs of the others.

"This is a particularly advantageous time for the electrical living salesman to give close attention to the effectiveness of cooperative endeavors.

"The time may soon be at hand

when the efficient and economical sales activities which can be developed in conjunction with others will be highly important to the continued success of local electrical enterprises.

"Preparations for selling in high gear must be made now—and lag between the decision to put real pressure on sales and the ability to do so may be costly indeed."

And, England told the conference, increasingly efficient methods of selling will be needed "if we are to double our load in the next decade.

Opportunity In Mass Selling

"Perhaps the greatest opportunity for more effective use of the salesman's time and talents will result from increased attention to 'mass selling.' By mass selling, we can prepare a vast market through extensive advertising—in newspapers, on radio, and particularly on television."

The need of closer cooperation in the industry was also emphasized by H. H. Brennan, chairman of the Electric Kitchen and Laundry Committee, in a talk before the Residential Section.

He stressed the point in reporting details of what was termed "the first cooperative program between all facets of the business"—the current electric range promotion developed by a joint committee of NEMA and EEI and co-sponsored by the two associations.

Brenan said that for the first time in almost a generation, the industry



may now become active in organizing long-range plans with some degree of confidence. He said the elimination of many hampering government restrictions "has given us vast new opportunities but with it greater responsibilities that challenge our creative abilities.

"As we look into the future, the problem is not one of supply but rather one of creating a demand for the goods that can be produced with an ever-expanding production capacity. We have now arrived at the point where expanded markets are needed to maintain a strong economy.

"One has only to look at the 1951 and 1952 major appliance sales results to see what can happen in a highly competitive market for the consumer's disposable dollars!

"In spite of high purchasing power, the 1952 sales of such important appliances as washers, ironers, refrigerators, ranges, water heaters, dishwashers, and disposers were the lowest in three years—not a pleasant picture for the electric industry that has been in the habit of establishing new records almost annually."

Dip In Electric Range Sales Needs Attention

Brenan pointed out that 1952 electric range sales were off 24% from the year before and off 42% from 1950. Furthermore, he said, the ratio

between gas and electric ranges increased from 1.7 in 1950 and 1.6 in 1951 to 2.1 in 1952.

The coordinated electric range promotion, which features the slogan "Women Who Know—Cook Electrically," is designed to revitalize the electric range business, he explained.

Being conducted during April and May, the promotion "provides the opportunity for all industry factors to aim at the same target at the same time with everyone using the same slogan," Brennan told the meeting.

He added: "I am sure you will agree that this kind of cooperative, concentrated effort has long been needed to gain maximum consumer impact."

At the present time, Brennan reported, 40 utility companies representing over 8,000,000 meters have registered to participate in the program and 19 others have purchased materials.

"With aggressive, united action," he asserted, "we should at least attain the 1951 sales level in 1953, an increase of 340,000 units over 1952 sales."

Brenan said the promotion will serve as a basic plan for the development of future cooperative industry programs and should be regarded as "the beginning of something big and important in the advancement of the electric business."

5 REASONS WHY YOU PALMER

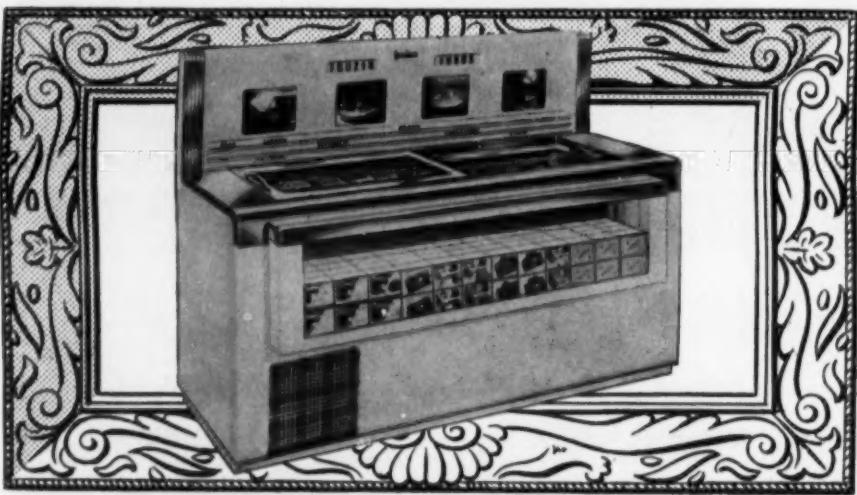
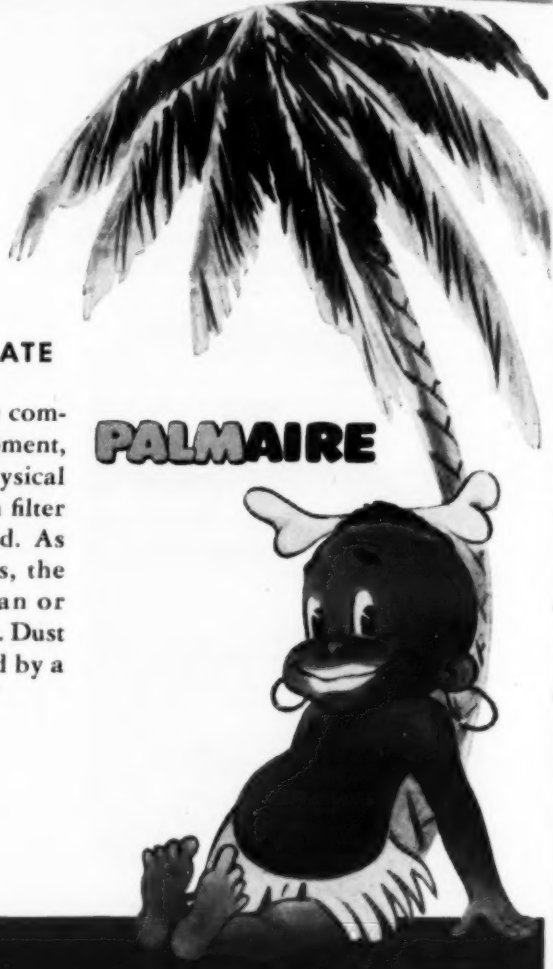
SNO-BREZE



HOW PALMER COOLERS OPERATE

Unlike refrigerated coolers that require compressors, coils, and other expensive equipment, Palmer Coolers operate on a simple physical law. Fresh outside air is drawn through filter pads which are continuously moistened. As the moisture in these pads evaporates, the temperature of the air drops and a fan or blower forces this cool air into the room. Dust and dirt are removed and a room cooled by a Palmer unit has "the breath of Spring."

PALMAIRE



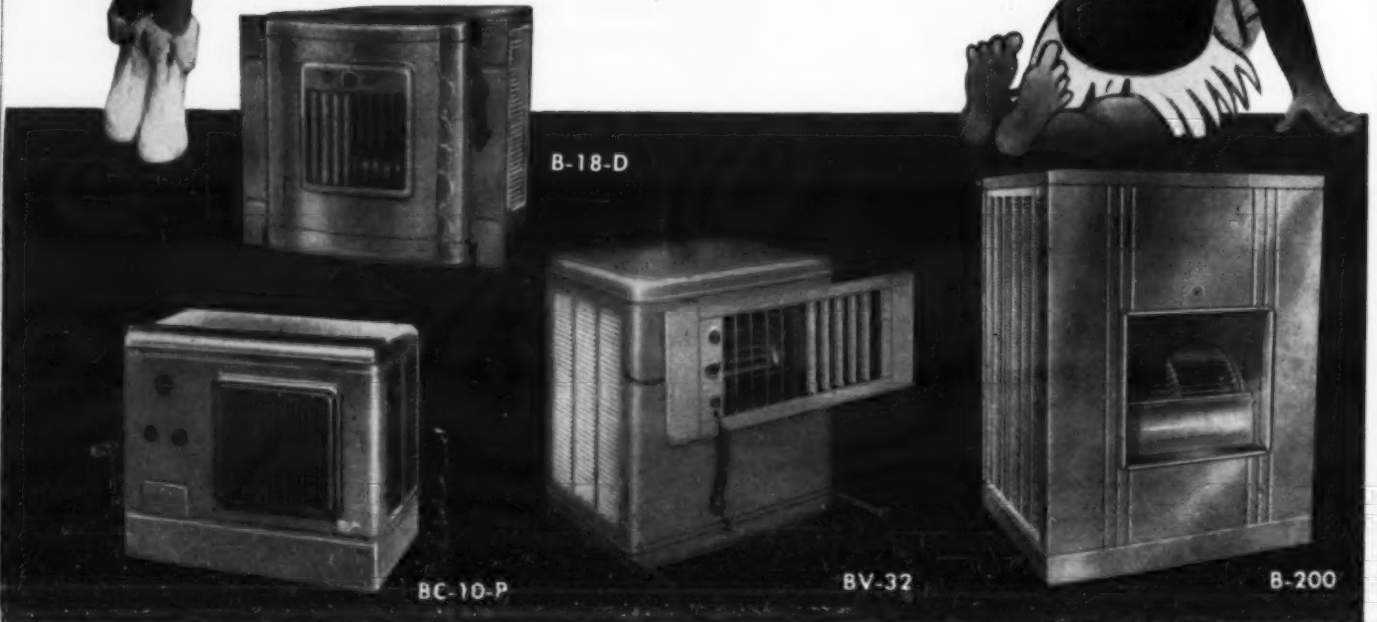
Are YOU in this JORDON Profit Picture?

NEW! Frozen Food and Ice Cream Merchandiser with PANORAMIC Glass Display Front. Model P-19. Here's another good reason why you should be in the Jordon profit picture, with the biggest and best line in Jordon history!

Write, Wire or Phone Today for Free Catalogue and Price List!

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Display Cases • Wall Cases • Reach-in Refrigerators • Beverage Coolers • Freezers • Air Conditioners • Dehumidifiers





Traveling Demonstration Unit

Converted Bus Allows Distributor To Provide His Dealers with Mobile Display To Promote, Close Air Conditioning Sales

ATLANTA — Prowling the highways of Georgia and neighboring states, a colorful red, blue, and aluminum converted bus is helping Max Wright air conditioning dealers promote their businesses and close sales.

Outfitted and put on the road last March, the bus—a "Greyhound" type of 40 passenger capacity—is expected to accomplish these results, according to Max Wright of Max Wright, Inc., local distributor of industrial, commercial, and domestic air conditioning and heating.

1. Provide a handy location, where both distributor and retail salesmen can demonstrate various types of air conditioners and evaporative coolers.

2. Provide a mobile demonstration unit that can be taken to prospects who find it inconvenient to come to the dealer's place of business.

3. Provide a rolling billboard and eye-catching attraction that will impress on the public the name of Max Wright and the products he sells.

4. Provide a colorful means by which dealers can broadcast their promotional messages or play recorded commercials or music as the bus travels down a street or is stationed at a convenient location.

Ben Gholston, Max Wright field representative, will have charge of the bus and will handle all demonstrations. He will show dealers and their salesmen how to display air conditioning and instruct them in successful methods of selling it.

Wright said that the bus travels on a schedule to accommodate dealers. A dealer can request the bus for a certain day, when it will be parked in front of his store or in a nearby lot. The dealer, Wright emphasized, can use the bus in any way he sees fit to promote his air conditioning business.

When Wright acquired the bus, he removed all the interior seating and overhead baggage racks and equipped it with both permanent and re-

movable counters and shelving on which various samples of both mechanically refrigerated air conditioners and evaporative coolers can be displayed and demonstrated.

Evaporative Cooler Used

In the former baggage compartment at the rear of the bus, Wright has installed a 4,500 watt, 2-cylinder gasoline electric generator that can develop more than 4 hp. of electric current for both lighting and power.

Also installed in this compartment is a Wright 2,500 c.f.m. evaporative air cooler which is connected to proper size metal ducts from the discharge side of the unit. On the ends of these ducts are installed, four-way Deflecto air grilles for even distribution and control of cooled air to all areas of the bus.

The air is exhausted out the front doors and front windows, thus providing the bus with constantly changed, cooled, fresh air at the rate of a



DISTRIBUTOR AIDS his air conditioning dealers by making this mobile showroom available to them for demonstrations. The bus may be used to call on customers or just be parked in the dealer's parking lot to attract attention. At all times the bus serves as a rolling billboard. An evaporative air cooler provides comfort for the customers and salesmen.

change every two minutes. The air is also 100% filtered, Wright said.

Double Seated Booth Installed Near Literature Rack

About midway in the bus, on one side, is installed a double-seated booth with a table in between. Both back and seats are upholstered in red leather. Directly above the booth is installed a literature rack designed to accommodate all sizes and shapes of literature, price lists, pamphlets, and order pads.

The booth is intended for the convenience of salesmen, dealers, and customers. Here they can sit down to review literature, discuss sales points, and write orders.

In the rear half of the bus, all counters and shelves are removable so that any tall piece of equipment can be installed on the floor. A total of 12 convenience outlets line both sides of the bus so that any unit can be easily plugged in and demonstrated.

Cold Drinks Provided

An added feature for the convenience of dealers, customers, and prospects, is a cold drink box with a capacity of 24 bottles. A drain connection extends through the bottom of the bus.

Underneath the instrument panel at the front of the bus is installed a tape recorder sound system with amplifiers, both for interior or exterior use. Voice broadcasts can be made directly over the amplifiers or through the tape recorder for rebroadcast over the amplifier.

There are two seats at the front, in addition to the driver's seat.

"If the dealer desires," says Wright, "he himself can occupy one of the front seats and direct the driver to go over any route in his city. He can tell his home people anything he wants to tell about his business or about air conditioning or heating."

Fluorescent lights are installed in the top of the bus directly down the center in a two-tube arrangement. This, according to Wright, was suggested by Sylvania engineers to give a soft lighting effect, even distribution, and no shadows.

In the permanent counter at the rear of the bus is installed a stainless steel sink connected to a water tank. This water is pumped from the tank by an electric pump and can be used for any purpose.

"Exterior colors," relates Wright, "were taken from an Eastern Air Lines Silver Fleet Constellation—a very beautiful shade of aluminum, blue, and trimmed in red. The lettering is of contrasting colors of the

same shade as the bus proper.

"The interior coloring is carried out in the same effect except in a lighter shade of blue and a more polished shade of aluminum with red trimming.

"The floor, removable shelves, and permanent counters are covered with inlaid red polished asphalt tile."

Bus Carries Advertising on All Sides

Advertising messages are lettered on all sides of the bus, including front, back, and top. Inscriptions on the top are printed so that they can be read from second story windows on both sides of the street.

The bus, concludes Wright "is part of Max Wright, Inc. service in co-operative advertising with our dealers, not only in selling them their stock orders but in instructing their salesmen and their sales force in proper selling. It is actually helping them close sales while the bus is in their town."

Air Conditioning Protects Boys' Town Stamp Display

OMAHA, Neb.—A valuable collection of rare stamps and letters of prominent world figures, on display in the museum of famous Boys' Town, Neb., is maintained in flawless condition with the assistance of an air conditioning system providing proper control of temperature and humidity at all times.

The museum display has been built up through donations from all over the world, according to Jack D. Kominsky, of the Kay Engineering Co., representative of the United States Air Conditioning Corp. here.

"When new additions to the collection arrive," Kominsky explained, "they are sorted and mounted for exhibition by the curator of the museum. If the gummed backs of these stamps should become moistened from perspiration or excessive humidity either during the necessary handling or after mounting, the stamps would stick to each other or to the mounting boards, causing irreparable damage. Maintenance of suitable conditions of temperature and humidity are therefore essential."

The air conditioning system utilizes UsAirco 7½-ton RK self-contained central station equipment, with built-in evaporative condenser, located in the building basement, from which conditioned air is ducted to the stamp room.

Wray M. Scott & Co. was the installing contractor, and Leo A. Daly was the building's architect.

SHOULD BE SELLING COOLERS!

1. The idea of cooling the home in summer is sweeping the country like a Kansas tornado. In 1952, four times more home owners purchased home air conditioning equipment than in 1949. Sales are astronomical and yet only 1 home in 10 that has electricity has any form of cooling. This is a vast market waiting to be shown and sold Palmer Coolers.

2. There is one drawback to most forms of home air conditioning—the cost of such equipment. Home owners want their houses cooled but are either incapable or unwilling to pay \$350 to \$450 to cool one room—several thousand dollars to cool a whole house.

3. There is a profitable answer to this problem for you. Sell and install low-cost, efficient Palmer Coolers. A unit to cool a single room can be had for as little as \$48. A large capacity unit to cool a whole house for as little as \$111.

4. The Palmer Manufacturing Corporation is a pioneer in the field of evaporative coolers and is the largest manufacturer in this field. The Palmer line

is complete and includes coolers of both fan and blower types in sizes to cool a single room or to meet every home, commercial or industrial need. Palmer Coolers are efficient, well built, handsome in appearance and are backed by a firm merchandising policy.

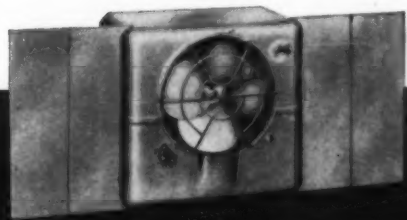
5. Unquestionably, Palmer is the best-known name in evaporative coolers. For many years, hundreds of thousands of Palmer Coolers have been giving satisfaction; and these coolers have been backed by extensive national advertising in leading publications.

For bigger profits sell Palmer Coolers!

Today, Palmer Coolers are backed by strong national advertising, with local advertising in newspapers, radio and television available to Palmer dealers. A complete merchandising program, including folders, catalogs and point-of-sale material—all mean bigger sales—bigger profits. Palmer Coolers are maintaining their leadership that makes them easier to sell—profitable to sell.

Palmer Manufacturing Corporation
Phoenix, Arizona

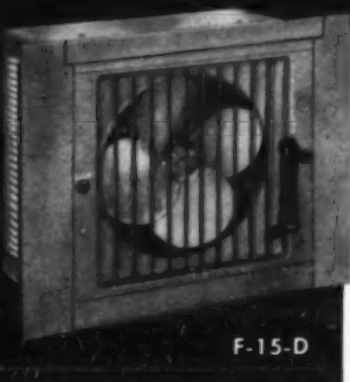
SUBSIDIARY OF McCRAY REFRIGERATOR COMPANY, INC.



FC-10-P



FC-15-P



F-15-D

Palmer Manufacturing Corporation
2200 W. Filmore Street
Phoenix, Arizona

Please send me information on Palmer Coolers. I am interested in ☐ A Distributorship ☐ A Dealership

Name

Company

Address

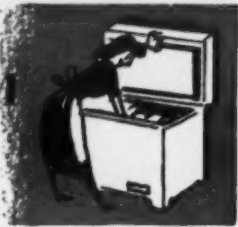
City

AREA SALES MANAGERS WANTED

In building the field force which is selling the new Silent Automatic heating line to wholesalers, we now have several openings in the responsible position of area sales manager. These men will be the first in their territories to offer products of Timken Silent Automatic Division to the wholesale heating trade for resale through retailers. To qualify, applicants must have full experience in selling major hard goods to wholesalers in sizable territories. Familiarity with home heating, while desirable, is not essential. Applications, accompanied by complete resume of qualifications and personal history, should be mailed to R. E. Loebell, National Sales Manager — Silent Automatic Products, Timken Silent Automatic Division, Jackson, Michigan.



HOME & FARM FREEZERS



Revco Pocket-Size Booklet Outlines Virtues of Chest-Type Home Freezers

DEERFIELD, Mich.—"What Type Freezer Should We Buy?" asks a pocket-size booklet published recently by Revco, Inc. The booklet purports to give the "Facts about Freezers," particularly a comparison of the advantages and disadvantages of chest vs. upright types.

Almost every consideration discussed by the booklet insists that the chest type freezer offers more advantages than the upright type. About the only advantage given for the upright freezer, in this booklet, is that it is preferable for installations in kitchens where less floor space per cu. ft. capacity is required. But, the booklet notes, "additional floor space must be allowed for the opening of the door."

Arguments given in favor of the chest type freezer are these:

"Chest freezers hold more food, per their rated capacity, than the upright type. Upright freezers lose space by not being able to stack foods clear to the top of the shelf. All the space that is occupied by the shelf itself is lost. . . . Irregularly

shaped packages which contain meats, poultry, fish, or game are harder to arrange and stack on the shelves of the upright freezer.

"Foods in an upright are most accessible when storage is at about 50% to 60% of its capacity. When filled to capacity there is the problem of removing packages to locate food in the back. In most uprights there is no place to lay packages taken from the front of the shelves when trying to locate packages toward the back.

In chest freezers, packages that are taken out to reach those in the lower layers can be placed on others in another section even though that section is filled to capacity.

"Uprights are generally more expensive in the larger sizes, per their rated size in cu. ft. of storage capacity. The difference in prices of the upright and chest type freezers is further increased in direct ratio to the actual amount of foods which can be stored.

"The chest type has a natural advantage in maintaining low tempera-

tures. When the lid is lifted there is very little exchange of cold dry freezer air of the food compartment with warm moist outside air, since cold air is heavier than warm.

"Fast freezing depends primarily upon the construction of both types of freezers and upon the reserve capacity of the compressor.

"Chest type freezers with cold wall construction and a separate fast freezing compartment are easier to freeze foods in, as it is not necessary to handle all of the food stored in the freezer to get at the freezing surfaces.

"If the compressor runs 25% of the time in order to maintain zero temperature for storage, then 75% of the compressor capacity is available for freezing normal loads of fresh foods as desired.

"The kind of insulation is important and should be the non-settling bat type.

"Chest type freezers with the new shell condenser construction eliminates so-called sweating.

"Freezers are heavy, even when empty, and a full load of food may add several hundred pounds. Chest type freezers distribute their weight over a larger area, which is important when the freezer is placed on beam-supported floor.

"Even though a freezer owner is careful to check on freezer operation frequently, an electrical current failure or a temperature rise can be so rapid in some parts of the freezer that a signal to give warning when something is wrong is a desirable feature."

The booklet explains to the prospective purchaser that "a cu. ft. is about 1/4 of a bushel. To convert size in cu. ft. to capacity in pounds of

meat, common practice is to multiply by 35. Thus, a medium size freezer of rated 15-cu. ft. capacity will store up to 525 lbs.

"Although the initial cost is greater for two small or medium size freezers than for a large one that provides an equal amount of space, the advantage may outweigh the cost factor. Some families prefer two freezers, as one can be used primarily for freezing and the other for storage.

"Some families may prefer one small and one medium size when the small size can be located in a kitchen or utility room for convenience, while the larger freezer is located elsewhere for the additional capacity required to serve the family's food needs."

Do Frozen Food Specialties Fit Into Initial Orders Of Food Plan Buyers?

NEW YORK CITY—Two speakers at a recent meeting of the Prepared Frozen Food Processors Association agreed that prepared frozen foods do not fit into the freezer-food plan picture as far as the initial food order is concerned, where meat accounts for the bulk of the order.

However, they disagreed on the role frozen specialties might play in food reorders.

Harvey Farber, president of the Food Plan Dealers Association and of Amana Products Corp., said his firm had included prepared frozen meals in initial orders but that there were very few reorders for them.

But Nat Friedman, a member of the Prepared Frozen Food Processors Association and also the Food Plan Dealers Association, said he felt there could be a place for frozen specialties in the freezer-food plan.

Friedman pointed out that customers have reordered such items as shrimp, fillets, scallops, and some breaded items. He suggested that an answer to the problem might be a combination package of assorted specialties.

During a discussion period, Farber was needed regarding the freezer industry's alleged inability to sell freezers without the food plan tie-in. Farber admitted this was so, commenting: "We can't go out and sell freezers; we have to sell the idea of general food savings."

Farber reported at the meeting that he is establishing a separate kosher food plan for the New York area.

'Freezer Feasts' Gives Recipes, Freezer Pointers

CHICAGO—A 48-page booklet on "Freezer Feasts—How to plan and prepare them" has been prepared by Admiral Corp. for purchasers of Admiral freezers, the company announced recently.

The booklet contains information on Admiral freezers and their use, preparation of foods for freezing, and recipes. A spritely "Freezer Angel" is introduced at the beginning of the booklet and appears continually throughout it in cartoons to illustrate various points.

Prepared by Admiral's home economics department, the booklet is indexed and printed in full color. Sample copies are available to dealers who write for them.

CORRECTION

No Lawsuit Filed Against Denver Better Business Bureau

In a story appearing in the Oct. 27, 1952 issue of AIR CONDITIONING & REFRIGERATION NEWS, the following statement was made:

"DENVER—Suit has been filed against the Better Business Bureau here by Colorado's Wholesale Food Plan, Inc., the state's leading promotion of freezer-food plans.

"The company charges in its suit that the Better Business Bureau has made incorrect and damaging statements concerning the firm's freezer-food plan."

The NEWS has recently received the following communication, dated April 8, from The Denver Area Better Business Bureau, Inc.

"This is to advise you that there has been no suit filed against the Denver Area Better Business Bureau, Inc. by Colorado's Wholesale Food Plan, Inc., nor, to this time, by anyone else. There has been no information or charges placed with the Denver Area Better Business Bureau in which any claim is made that the Bureau has made incorrect or damaging statements concerning the Colorado's Wholesale Food Plan. Nor has the Colorado's Wholesale Food Plan made demand upon this Bureau for retraction of any statement allegedly made.

"Thus it would appear that the information contained in the article referred to above as it relates to the Denver Area Better Business Bureau, Inc., is false and misleading.

"We ask that you make immediate and satisfactory retraction."

The NEWS regrets that it published, in good faith, information relative to an alleged lawsuit against The Denver Area Better Business Bureau, Inc., which was false and misleading. A staff member got the information from a man who misrepresented himself as an official of the company allegedly bringing the lawsuit, as is explained in the following letter received by the NEWS:

Colorado's Wholesale Food Plan, Inc.
Denver, Colo.

Editor:
It has come to my attention that an article appeared in your Oct. 27, 1952, issue, with headlines on Page 1 claiming the Colorado's Wholesale Food Plan was in the process of suing the Denver Better Business Bureau.

I was more than surprised because no officer in our corporation gave out information of this kind. In trying to trace the source of your information I found out that one of your reporters, C. Dale Mericle, had approached one of our salesmen at the Home Show earlier that month; I might add that this salesman was fairly new with our concern and is no longer employed by us.

ELTON R. PARKS, JR., President

Harderfree Names Outlets

NILES, Mich.—Two new distributors have been appointed to handle the Harderfree home freezer line, according to an announcement by Dick White, sales manager, Harderfree Division, Tyler Fixture Corp.

Interstate Electric Co., Texarkana, Ark., will cover parts of Arkansas, Texas, Oklahoma, and Louisiana. Mecca Sales Co., Inc., Westfield, N. J., will handle sales for six counties in New Jersey.

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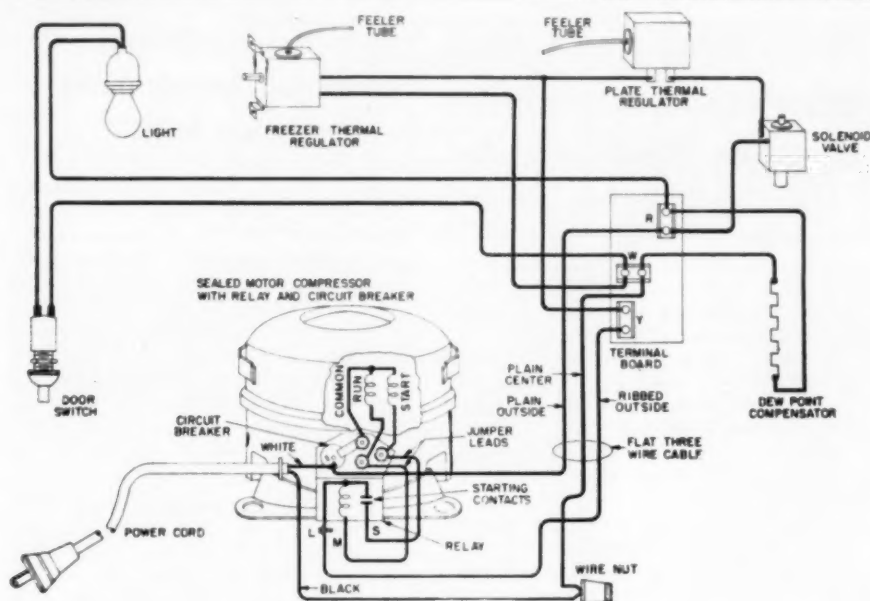
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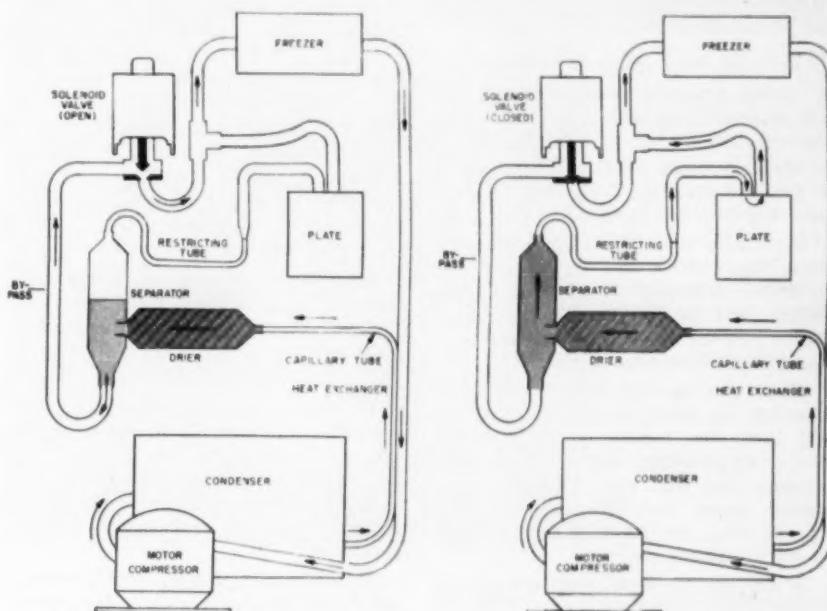
ESMOND RHODE ISLAND



LEFT: FIG. 1 illustrates the electrical circuit of the new Philco refrigeration system and its components

RIGHT: FIG. 2 shows the flow action of the refrigerant with the refrigerant valve opened and closed.

HOUSEHOLD REFRIGERATION



How Philco 'Fully Automatic Air-Conditioned Refrigerator' Makes Use of 2 Separately Controlled Heat Absorbing Devices

Design details have been released recently by Philco Corp. on the household refrigeration system used in some 1953 models, which system Philco claims provides the "first fully automatic air-conditioned refrigerator," with temperatures of 38° F. to 42° F. in the regular food storage compartment, and temperatures well below 0° F. in the freezer section.

Three models in the 1953 Philco line, the H-1137, H-1138, and H-1138 (two-door model) all incorporate the new system.

These refrigerators have two separately controlled heat-absorbing devices: one is the conventional evaporator in the freezer, and the other is a cooling plate located at the rear of the food compartment.

Fig. 1 illustrates the electrical circuit of the new Philco refrigeration system and its components, and Fig. 2 shows the flow action of the refrigerant with the refrigerant valve opened and closed.

The freezing compartment is completely sealed off from the food compartment, so that the temperature of

one does not affect the other. The temperature of the freezer is governed by the freezer thermal regulator. This regulator functions to start and stop the motor-compressor at evaporator cut-on and cut-off temperatures.

Temperature of the food compartment is governed by a separate plate thermal regulator which is pre-set to maintain the food compartment at a desirable temperature level. It is adjustable only for variation in altitude.

The plate thermal regulator is located inside the cabinet and is connected in series with the solenoid refrigerant valve that controls the passage of refrigerant through the plate. When the plate regulator contacts close, the solenoid is energized and the valve opens. These points are illustrated in the wiring diagram.

FLOW DIAGRAM EXPLAINED

To illustrate the actions shown in the flow diagrams, assume the entire refrigerator is warm, with both freezer and plate calling for refrigeration. The freezer thermal-regulator contacts will be closed, thus causing the unit to operate.

The plate thermal-regulator contacts open and close in a manner exactly opposite to that found in conventional temperature controls. That is, at the plate's highest temperature the regulator contacts open instead of close, allowing the solenoid valve to close the by-pass around the plate refrigerant circuit (right sketch in flow diagram).

Under these conditions liquid refrigerant from the condenser flows into the drier and separator and on through the plate and freezer, because the closed valve stops flow through the parallel path or by-pass. Thus, both compartments are cooled individually at the same time.

When the plate temperature reaches approximately zero degrees the plate regulator closes its contacts, causing the refrigerant valve to open. Under these conditions the refrigerant flow through the system is shown in the left-hand sketch in the flow diagram.

The parallel path through the valve carries the refrigerant directly to the freezer evaporator and the freezer alone is refrigerated. The unit continues to operate until the freezer

reaches its cut-off temperature; then the unit stops.

Design of the cooling surfaces and the regulators is such that the plate-regulator contacts always close to stop refrigerant flow through the plate before the freezer is cold enough to stop the unit. Since the range of plate temperature is from 0° F. to 38° F., the plate defrosts automatically during each cycle whenever the plate temperature is above 32° F. The defrost water drains into a receptacle.

Since the freezer is completely iso-

lated from the food compartment, frost accumulation is negligible, and is easily removed with a plastic scraper.

There are no controls to change on the automatic, air conditioned refrigerators from season to season.

In addition to this refrigeration system, these automatic models have an air circulator baffle mounted in the top of the food compartment that directs the air flow to the top and down the back of the compartment.

As warm air enters the refrigerator it is directed in this path and excess moisture is removed when it passes over the cold plate on the back wall.

NEW PRODUCTS?

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INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)
so many potential customers. (Use this especially if he's got to sell his boss on the junket.)

"Write to him several times. He'll be less apt to wire his regrets three days before the meeting.

"Give him all the facts. Tell him where and when the meeting is to be. Settle definitely on the title of his subject and its length. Whether you pay or not, bring up the matter of expenses and fees immediately.

"Pick him up and take him to the meeting. At least be certain that he can find the basement of Rabinowitz's Rathskeller alone. Help him arrange his material, lights, slides, screen, easel, microphone, etc. And try, do try, not have the first slide go on upside down.

"Start on time. A laggard policy progressively worsens. Don't make it worse by expanding your introduction into a personal appearance. Try to pronounce his name correctly and get the facts right. Don't apologize for having brought him.

"If he is to answer questions, better have someone to act as a buffer—someone who can discourage the talkative, the querulous, the incorrigible.

"Compliment the guy. Tell him he was wonderful. He knows better, but it makes him feel good."—GEORGE MARSH in the New England Printer.

Can Your Boy Qualify?

A scholarship program aimed at aiding deserving students, and subsidizing the colleges or universities they choose to attend, has been announced by the Maytag Corp.

Complete college course scholarships, with tuition and special academic fees paid, plus financial assistance to the student, are included in the terms of the Maytag scholarships program.

Any senior high school student whose father, mother, or legal guardian is a regular full-time employee of the Maytag Co. is eligible to compete for the scholarships.

Sons and daughters of Maytag officers in branches throughout the United States, plus field personnel working under the Maytag sales department also are eligible.

Students who qualify for these awards will have their tuition, plus special academic fees paid at any accredited college or university in the United States. They will receive, in addition, a cash grant of \$75 per semester.

Trustees of the Maytag Foundation set forth the belief "that our American way of life will continue to flourish only so long as it is supported and maintained by men and women who possess disciplined minds, a sense of social and moral responsibility, and a highly developed capacity for leadership."

(Every year many outstanding high school graduates are forced to abandon their formal education because they lack the money required to attend a college or university.)

"The acceptance of a scholarship award carries with it no obligation

to the Maytag Co. Foundation, Inc., nor to the Maytag Co., beyond the simple obligation of the student to do his very best to make a real contribution to the community in which he lives after he has completed his studies."

Candidates will be selected VIA the applicant's high school record—including scholarship, leadership, and extra-curricular activities, performances on a college aptitude test, recommendations of high school teachers and other references, and financial need.

The Maytag trustees are aware that the charges made by colleges and universities seldom cover the entire cost of a year of education. Therefore, they will make an unrestricted supplementary contribution of \$500 a year to the selected institution for each student enrolled under the scholarship plan. Said \$500 will be added to tuition costs. Bully!

Take It Easy, Ambitious Promoter!

A Los Angeles office of the General Electric Co. received a postcard from the National Business and Property Exchange of that city. The card, signed by a Glenn Collins, notified the largest electrical manufacturing concern in the world that Mr. Collins' clients were interested in buying businesses like General Electric!

The General Electric correspondent, in reply, doubted that the company was for sale. Also, he observed drily, it was improbable that there were many clients of the National Business and Property Exchange prepared to make a suitable offer, since General Electric sales run in excess of two billion dollars a year.

Frozen Bread Seen Cutting Baker's Costs, Maybe Price; Lengthens Bread Box Life

PORT CHESTER, N. Y.—Mass distribution of frozen bread, after several months of test marketing in the New York City and Miami, Fla. areas, was started recently by Arnold Bakers, Inc. here.

Frozen bread, Ronald Casey, Arnold's sales manager, hopes, will eliminate returns of stale loaves, permit lower cost baking, and allow distribution economies. He thinks that eventually it may lead to lower bread prices.

Arnold bakes the bread in its own plant here and trucks it to a commercial freezing plant in the Bronx. Here, when the bread is only three or four hours old, it is frozen at -5° F. and stored at 5° F. in the plant's warehouse.

Then it is shipped out as needed to retailers or moved by refrigerated truck to a distributor in Miami. The retailer can keep the bread in his own freezer and frozen food display case. Or, if his customers object to the idea of frozen bread, he can thaw out what he thinks he can sell and display it with the fresh bread. Thawing takes from three to four hours, it was said.

Casey claims that after the customer purchases the bread, it will have a longer bread box life than that of fresh baked bread.

Big problems for the baker of frozen breads, Casey says, are insufficient freezer space at the retail level and educating consumers to using frozen breads.

As returns average about 4% of the baker's total output, their elimination alone would make the production of frozen bread worthwhile to the baker, he added.

Frozen Food Distributors, Packers Set Separate Dates For Conventions In 1954

NEW YORK CITY—The National Wholesale Frozen Food Distributors Association and the National Association of Frozen Food Packers, who in the past have co-sponsored the National Frozen Food Convention, have announced separate dates for their conventions next year.

The packers will hold their convention from Feb. 1 through 4 in the Commodore hotel here while the distributors will meet from Feb. 21 to 24 in the Waldorf hotel here.

The dates for the distributor convention are the ones originally announced for the next National Frozen Food Convention. The two groups have alternated in managing the show and 1954 was to be the distributors' turn.

The packers, however, are reported to have sought to gain permanent management of the joint convention because they had a permanent staff and greater organizational facilities.

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← **"C" CHARGE** for suction temperatures above zero.

← **"Z" CHARGE** for suction temperatures below zero.

plus **"X" CHARGE** for extremely low temperatures.

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with Selective Charges from your Wholesaler today!... and be sure to ask him for the Sporlan 52-C Catalog. With it you can select the proper Thermostatic Expansion Valve, Solenoid Valve and Catch-All to give that Sporlan "Right-Down-the-Line" Peak Performance!

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Slater Represents Bally In Northwestern States

BALLY, Pa.—Robert R. Slater, of Seattle, Wash., has been engaged by Bally Case & Cooler Co. here as a field representative to cover the states of Washington, Oregon, Idaho, Montana, and the province of British Columbia, Can.

His appointment was announced by Leon Prince, sales manager of Bally. Slater has had many years' experience as a manufacturer's representative in the Northwest. He also represents other manufacturers of refrigeration equipment and components.

Crosley Appoints Averill Area Freezer Specialist

CINCINNATI—Appointment of R. R. Averill as home and farm freezer specialist in the Atlanta region of Crosley Div., Avco Mfg. Corp., was announced recently by F. F. Duggan, general sales manager of appliances.

Averill, who attended the University of Buffalo, has had extensive experience in the major home appliance field in Minnesota and more recently in New Orleans, where he served as freezer specialist for one of the largest appliance distributing houses in the South.

His territory will include the Atlanta and Dallas zone.

Carrier Names Davis Asst. Public Relations Director

SYRACUSE, N. Y. — Leonard L. Davis, Jr., for the last two years publicity manager of Vick Chemical Co., has been named assistant director of public relations for Carrier Corp., it was announced by J. K. Barnes, Jr., director of public relations.

Immediately prior to his association with Vick, Davis was radio news editor for American Broadcasting Co. He joined ABC from Shell Oil Co. where, for two years, he was a member of that firm's public relations department.

Davis has served on the editorial staffs of the Providence (R. I.) Journal, Schenectady (N. Y.) Gazette, and Albany (N. Y.) Knickerbocker News.

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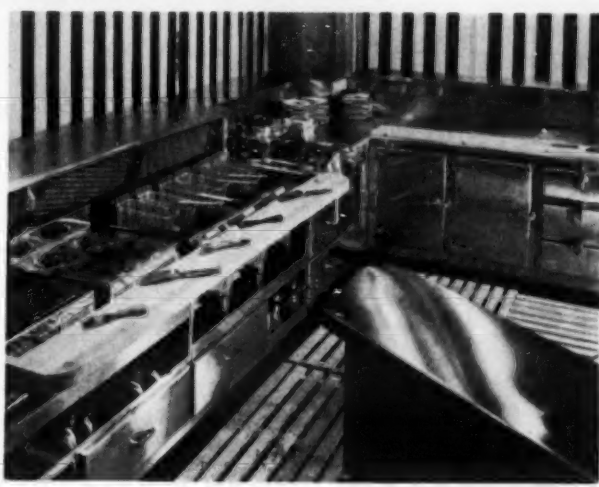


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RESTAURANT & BAR ROTISSERIE



STAINLESS STEEL cooler in Randy's restaurant in Chicago is completely self-contained with refrigeration system, water filter-cooler and ice bins. High density Fiberglas insulation is used throughout.



STAINLESS STEEL topped serving counter is angled to facilitate food pick-ups and speed service at Randy's. All stainless steel Leitner kitchen accommodates grill, fry, and griddle units, incorporates the "intensified" down-draft Leitner ventilating system which removes smoke, grease, and odor as they are created.



SPECIALLY ENGINEERED for Randy's by Leitner is the 14-seat capacity stainless steel counter unit. Although it holds all serving supplies and set up necessities, compartmentization allows easy and fast service. Removable garbage containers and separate dirty dish bins are concealed for better appearance, yet are easily accessible. Tweed effect Formica eating surface matches table and booth decor.

'Super Efficient' Kitchen

Open-View Restaurant Appeals to Customers' Comfort, as Well as Taste, With Speed, Convenience, Cleanliness as Prime Factors

CHICAGO — Since Lloyd Ganger opened the brilliant hued awnings on his picture window kitchen on St. Patrick's Day, Randy's restaurant at the corner of Randolph and Michigan here has served "S.R.O." crowds of 1,200 daily between 7 a.m. and 9 p.m. Considering its seating capacity of 88, this is super efficiency in action at the hub of any successful restaurant—its kitchen.

Decor, service, prices—all mean nothing if the kitchen isn't able to keep up with the customers. And restaurant - owner - manager, Lloyd Ganger, who also opened the successful Ham'n'Eggers, made the kitchen at Randy's the most efficient developed so far for this type of establishment.

A veteran of 24 years in the kitchen equipment field, as well as in restaurant planning and designing,

Ganger chose for Randy's the most modern setup ideally suited for this all-short-order spot. Using stainless steel Leitner equipment, Ganger planned and built this kitchen with every "must" in mind, including faultless elimination of smoke, grease, and odors, which is generally a prime bugaboo in this type of open-kitchen restaurant.

A completely new method of smokeless, greaseless, odorless operation was designed and perfected by Ganger in cooperation with Leitner engineers. No hoods are used over the grill, no noisy fans.

No Smoke, Grease, or Odors

Elimination of extraneous air substances is accomplished by a new type of down-draft or "intensified-draft" ventilation which removes all

smoke, grease, and odor as it is created during the cooking process. This ventilating system, which is proving 100% effective at Randy's, will be available to other restaurants through Leitner.

Additional ways of stepping up efficiency and speed of service is through the interchangeability of the all-electric cooking equipment. This promotes extreme flexibility of kitchen operation without having "dead head" units. At Randy's the grill, deepfry, griddle function constantly in one operation or another, permitting greater consolidation of equipment and eliminating waste action on the part of the cooks. This concentrated type setup permits faster, better preparation and serving of all orders from a central point.

In addition, stainless steel drip pans are located below the cooking units. These can be easily cleaned of surplus grease, preventing fires and odors.

Counter Unit Handles 14

One of the most unusual features of Randy's uniquely designed service system is the Leitner stainless steel counter unit which seats 14. This is the ultimate of efficiency, just as is the busy short-order kitchen in full view of the public. Completely self-contained, the counter unit has an exceptionally good dirty dish and waste disposal system which is entirely separated from clean food and dishes. This avoids confusion and speeds up the cleanup. Removable garbage containers and separate dirty dish bins are concealed for better appearance, yet are easily accessible.

Counter-seated customers find another unusual aspect to hurry-up dining at Randy's. They do not face a wall of mirrors, printed menus, or stacked supplies. Instead, they look through a clear glass picture window-wall toward Grant Park, Michigan Ave., and the construction crews at present putting in the new super-size underground garage.

All the things that people who "eat out" look for and appreciate are embodied in this handsome new restaur-

ant at one of Chicago's busiest corners. Beyond the blessing of good food, cooked on order in full view and served with the greatest speed and efficiency possible—there is much on which to feast the eye as well.

Randy's "ranch house modern" decor, also the idea of the owner, forms a pleasant panorama of redwood, tile, colorful Roman brick, natural stone, and full-blown desert blossoms in handsome shadow boxes. Comfort for the customer is also foremost at Randy's which is completely air conditioned by York, and "smell conditioned" through the new Ganger-Leitner ventilating system.

Tweed-textured beige plastic upholstery highlights the booths and the modern wrought-iron chairs which mate with black "tweed" topped Howell tables which have spill, spot, and burn-proof plastic surfacing.

Efficient Operation Keeps Traffic Moving

Though there is such an invitation to linger in this pleasant atmosphere, there is an average full-capacity turnover every hour. This does not mean that customers are rushed out still chewing the last bite, but rather—it points up the extremely efficient operation of this busy new spot.

Koch Publishes New Catalog On Reach-In Refrigerators

NORTH KANSAS CITY, Mo.—A new edition of the Koch reach-in refrigerator catalog has been published recently by Koch Refrigerators here. It contains illustrated description sheets, specifications sheets, and price lists. Copies are available from the company without charge.

To Air Condition Building

DECATUR, Ala.—According to Architect Horace M. Weaver, the Mutual Savings building here is to be remodeled into a five-story structure with year-round air conditioning.

Tenney's

On the Move!



... with top-flight refrigeration equipment like this drum unit—backed by the finest engineering and a fair, rock-solid distributor policy.

Interested...?

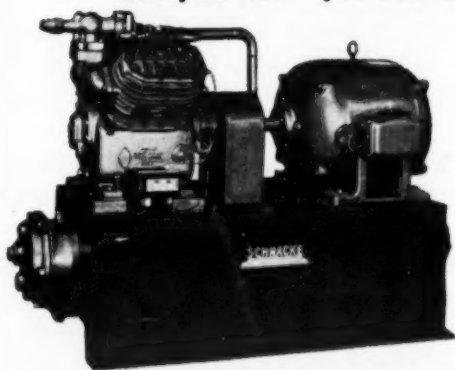
Talk it over with

Tenney

ENGINEERING, INCORPORATED
Newark, New Jersey

DIRECT DRIVE

The industry's smallest, most compact compressor—yet the most rugged.



Direct Drive Compressors are available in 15 H.P., 30 H.P. and 60 H.P.

Compactness, efficiency, and low price are advantages in all Schnacke compressors and condensing units from 5 H.P. to 60 H.P.

Ideal for multiple installation in close space requirements.

Two Schnacke 50 or 60 H.P. compressors require no more space than ordinary 100 to 125 H.P. compressors. They are ideal for multiple installations up to 350 tons, and provide many advantages of automatic control and economy. Schnacke production manufacturing methods make possible the highest quality, including bronze steel back bearings, force feed lubrication, and rugged design and construction, at lower cost.

Write for complete, convincing facts.

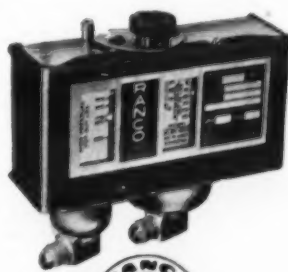
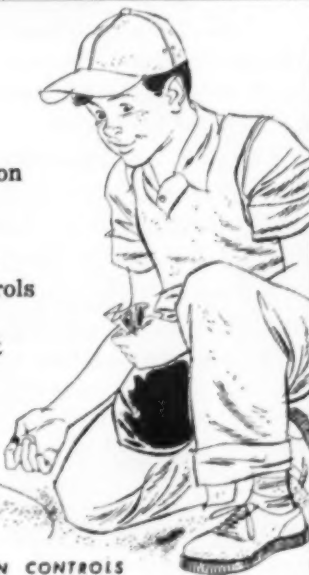
SCHNACKE, INC.

1101 N. Governor St.

Evansville, Ind.

PERFORMANCE is the payoff!

You're playing for keeps in the refrigeration service business. That's why you must be sure when you select controls. One fact is obvious—you can't go wrong with Ranco—maker of over 50,000,000 refrigeration controls in actual use today. And you don't have to hunt for the right control—not if you visit your Ranco dealer first. Ranco controls are available for more than 4,000 replacement installations!



Ranco Inc.
COLUMBUS 1, OHIO

WORLD'S LARGEST MANUFACTURER OF REFRIGERATION CONTROLS

SUB-ZERO
Cascade
MILK COOLERS
COOL FAST... SELL FAST!

FROM 95°
to
40°
in
ONE HOUR

4-CAN DELUXE



Sub-Zero—the fast cooling, fast selling, complete line of milk coolers features front opening doors, low lifts, non-rust aluminum exterior, sealed refrigeration units, economical operation. Both Cascade (Deluxe) and Spray Types in 4, 6, 8, and 12 can capacities. Write today for information.

SUB-ZERO FREEZER CO., INC.

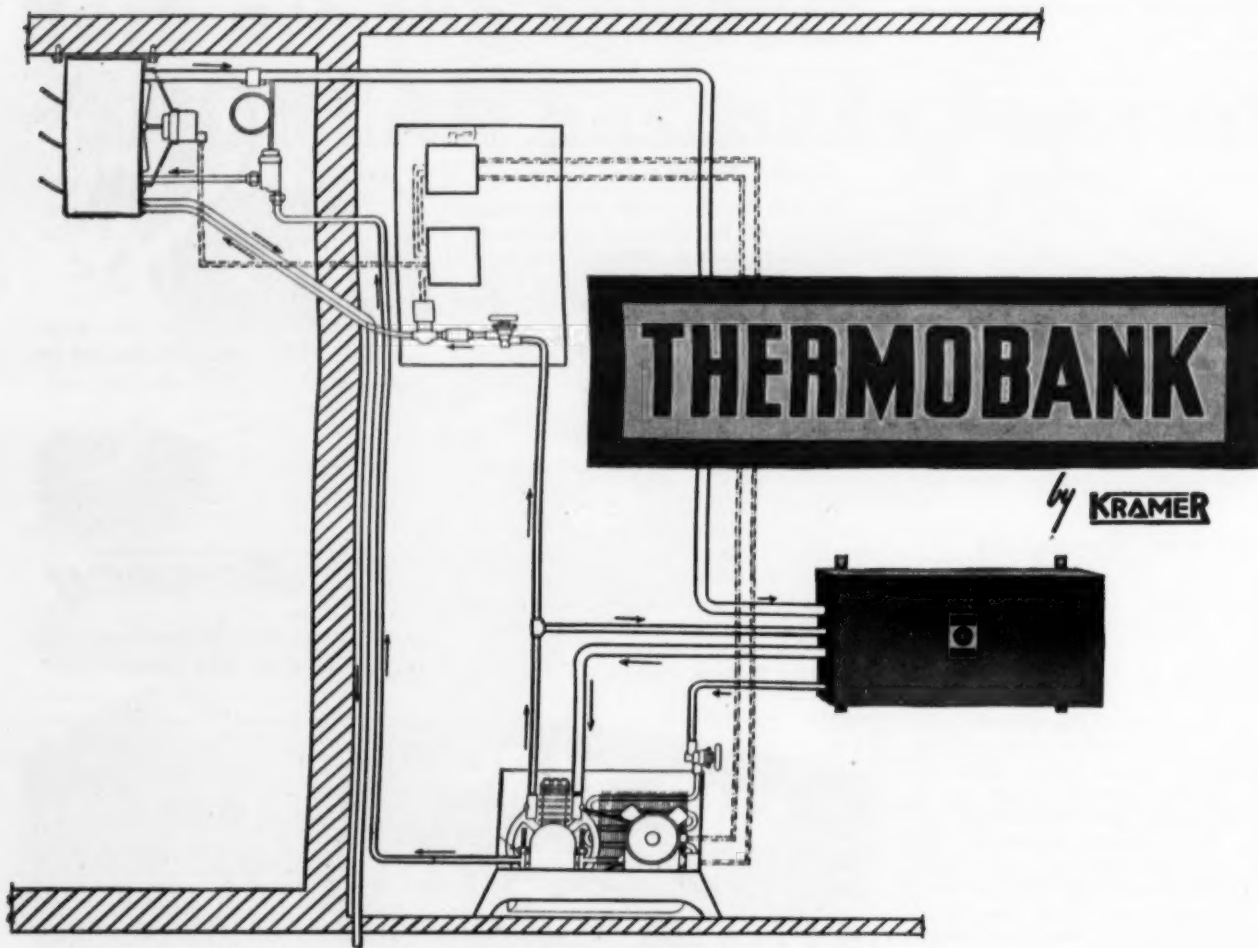
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● MILK COOLER ● FREEZERS ● AIR CONDITIONING

They'll Do It Every Time By Jimmy Hatlo



Have You READ 'Peace and Progress' Yet?



Look at the record before you buy any defrost system

For eight years THERMOBANK has been the unquestioned standard for low temperature automatic defrosting. Significant improvements over the years have made THERMOBANK even better.

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WRITE FOR BULLETIN R-124

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"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

Fingers of Fate

ALTHOUGH the results won't be apparent to many readers for quite awhile, the impending merger of the Refrigeration Equipment Manufacturers Association (REMA) and the Air Conditioning & Refrigeration Machinery Association (ACRMA) is the most significant news we've reported in a long time.

The effects will be far-reaching, and surely will advance the growth and well-being of our industry immeasurably.

Many times during the last dozen years attempts have been made to amalgamate these sometime rival organizations. Reasons for the merger have been obvious:

- (1) Duplicate functions and aspirations.
- (2) Duplicate membership, in many cases.
- (3) Excess time and money spent by company representatives doing the same things on comparable committees.
- (4) Overlapping statistics which have been confusing and inadequate. (In one over-all industry organization sales and production figures—which are useful in retail planning—can be valid because the entire industry reports to a central source of statistical information.)
- (5) Standardization—badly needed for cost reduction and service simplification—can't be effected unless all the specifiers are under the same tent.
- (6) In dealing with government, a united front is much more powerful than divided groups. The latter often appear to be at cross-purposes—and annoy government Poobahs more than they influence them.
- (7) To promote the entire business, and to recruit newcomers, ONE BIG association can do a lot more than several competing crowds.

Despite these unassailable arguments for an All-Industry Institute, previous attempts have foundered on the rocks of special interests and inertia. Editors of AIR CONDITIONING & REFRIGERATION NEWS (in whose headquarters REMA was founded) have led several of these abortive experiments toward amalgamation.

Three "fingers of fate" underwrote the getting-together. Within one week after emissaries from each organization had agreed to try it again:

- (1) The secretary of one association resigned to take another job;
- (2) Secretary of the other died suddenly;
- (3) An enormously competent, universally respected, and everywhere well-liked business executive, who had been active in both associations, became available for the post of Managing Director.

Fate took a hand, it would appear. At the Hot Springs meeting the vote was unanimous to merge. First time in the history of either organization that a few rugged dissenters didn't exercise their privileges to disagree on something.

Key to this extraordinary unanimity is the personality and attainments of George Jones, the chosen-by-acclaim Managing Director. Few people in any industry have acquired so many solid friends, earned so much affection and admiration, or deserved such a good deal. Many details remain to be worked out—but the general attitude of almost everyone was: "Let George do it. We can trust him."

No greater tribute could be paid to any man.

No better start could any new organization receive.

Feb. Refrigeration Equipment Wholesalers Sales Top Last Year by 6%

Sales

Kind of Business and Geographic Division	Per Cent Change		Feb. 1953 Panel	
	Feb. 1953— from Jan. 1953	2 Mos. from Jan. 1953	No. of Firms Reporting	Reported Dollar Values (add 000)
Appliance and specialties wholesalers	+21	+23	119	26,061
New England	+31	+15	18	2,122
Middle Atlantic	+23	+39	7	10,229
East North Central	+23	+8	28	3,298
West North Central	+15	+12	12	1,288
South Atlantic	+20	+20	26	3,687
South Central	+12	+35	11	2,127
Mountain	+3	+10	6	1,133
Pacific	+24	+6	8	2,177
Refrigeration equipment, parts (com'l)	+6	+2	74	1,594
Middle Atlantic	+1	+7	15	505
East North Central	+5	+35	1	169
West North Central	+32	+5	+18	5
South Atlantic	+14	+7	22	409
South Central	+11	+22	-11	4
Pacific	+20	+14	0	153

Inventory, End-of-Month (At Cost)

Kind of Business and Geographic Division	Per Cent Change		Feb. 1953 Panel	
	Feb. 1953— from Jan. 1953	2 Mos. from Jan. 1953	No. of Firms Reporting	Reported Dollar Values (add 000)
Appliance and specialties wholesalers	+7	+11	93	26,215
New England	+11	+7	10	1,795
Middle Atlantic	+2	+6	19	7,773
East North Central	+9	+12	12	3,414
West North Central	+1	+13	11	2,174
South Atlantic	+27	+19	20	4,250
South Central	+12	+14	10	3,059
Mountain	+32	+14	6	2,013
Pacific	+10	+10	5	1,737
Refrigeration equipment, parts (com'l)	+11	+1	64	3,695
Middle Atlantic	+33	+8	11	833
East North Central	+3	+3	14	494
West North Central	+7	+3	5	405
South Atlantic	+1	+3	22	1,254
South Central	+9	+4	8	395

*Insufficient data to show separately.

Appliance, Specialty Wholesaler Sales For February Up 21% Compared to 1952

WASHINGTON, D. C. — Sales of appliance and specialty wholesalers in February advanced 21% compared with a year ago and were up 23% from the previous month, according to the Bureau of the Census.

February sales of refrigeration equipment and parts wholesalers also showed gains over last February and January, 1953. They rose 6% above a year ago and 2% over the preceding month.

In the first two months of 1953, appliance and specialty wholesalers' sales rose 15% compared with the like 1952 period. However, sales of

refrigeration equipment and parts wholesalers in the first two months dipped 2% below last year.

Inventories of wholesalers of appliances and specialties at the end of February were 7% higher than at the end of February, 1952, and 11% above the end-of-January level. Those of refrigeration equipment and parts wholesalers declined 11% from the year-ago level and 1% from the end of the previous month.

Total wholesalers' inventories (valued at cost) as of Feb. 28, 1953, were 3% above stocks on hand Jan. 31, but 2% below a year ago.

Cartoon Sign, Outdoor Display Boost Repair And Sales Volume

AURORA, Colo.—On the drive-in parking lot in front of Aurora Appliance Co.'s repair shop is a sign bearing a cartoon of a broken-down washing machine and the slogan, "Hospital for Sick Appliances."

Placed only a few feet from the sidewalk, the sign is seen every day by the thousands of motorists who pass the shop located a few miles east of Denver on busy Highway 40. The motorists also see, the reconditioned appliances which the firm sets out in front of the shop.

This display has resulted in some 25 to 30 extra repair jobs every day, fast turnover of used refrigerators, and extra sales of new refrigerators, according to Thurman Frazier of the management.

Aurora Appliance sells to a heavily-populated trading area consisting of several Denver suburbs and surrounding truck-gardening areas. It handles electrical and gas appliances and heating equipment and offers a complete appliance repair service.

The firm has made a heavy bid for repair volume by setting up a separate repair operation on the corner of its lot. This consists of a small building in which traffic appliance and TV repairs are made and a large shop at the rear for refrigerator, range, washing machine, and home freezer reconditioning.

Because of the steady flow of old refrigerators brought in by their owners, or picked up for repair, the



HOSPITAL FOR SICK APPLIANCES and this outdoor display of used appliances are credited with bringing in some 25 to 30 extra repair jobs every day for this Aurora, Colo., dealer.

company has developed a lot of additional new refrigerator sales, it was reported.

Old boxes which would represent high expense for repair are carefully studied, and if the owner would be better off buying a new one, Aurora Appliance offers a worth-while allowance.

The store can usually peg its allowances above the usual figure, inasmuch as the prominent location and the display of units on the sur-

rounded driveway in front of the repair shop turns them over rapidly. It is unusual for a used refrigerator to remain on display in this outdoor area more than two days, according to Frazier.

The company refinishes each box, replaces most of the chrome hardware, and offers a 90-day guarantee, all of which appeals to farmers, suburbanites, and vacationists who need a refrigerator for mountain-cabin use.

"Here's why I'm 100% for A-P CONTROLS"

Says Glen Pohle, owner, Refrigeration Service Co., Milwaukee, Wis.

... and these Milwaukee jobbers agree
A-P CONTROLS PAY BIG DIVIDENDS

They know from experience...A-P Controls are best for guaranteed servicing

"You bet I like A-P valves" says Glen Pohle, "and I'll tell you why. In my business, it's absolutely necessary to have valves I can depend on to operate perfectly — and to keep on functioning perfectly day after day with no further attention."

"That's why I'm sold on A-P valves. They're easy to install... adjustment is quick and easy... and they sure cut down on call backs! When I install an A-P valve on a customer's job, I know that I'm giving him the very best in performance and dependability. And believe me... that's the way to keep customers!"

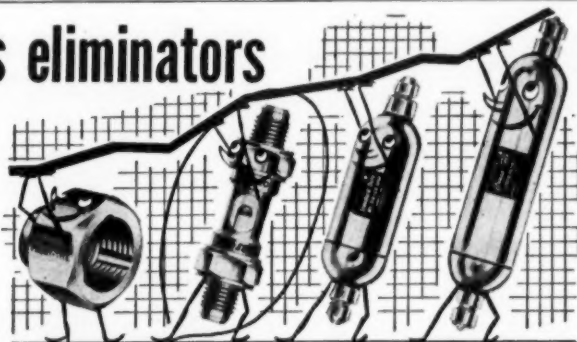
You'll make your customers happy, too, if you concentrate your selling efforts on A-P — the **DEPENDABLE** controls!

A-P CONTROLS CORPORATION

2460 North 32nd Street, Milwaukee 45, Wisconsin
In Canada: A-P Controls Corp., Ltd., Cooksville, Ont.

REMCO loss eliminators

pull up
profits
for you!



FROST-TITE FLARE NUTS
with forged frost-relief slots. No more losses from loosened "creeping" nuts.

STANDARD DUTY DRIERS
The lowest cost, most-efficient molded drier on the market.

Cross-Flow DRIER FILTERS
Heavy-duty — with new Fiberglass Depth Filter and new Remco Drying Element.



E-Z-SEE leakproof
LIQUID FLO-INDICATORS
with **NEW Flow-Responsive FLAP** to
instantly indicate all variations
or interruptions of flow.

The most versatile, dependable liquid indicator on the market—now more efficient with its exclusive new FLO-Indicator, which indicates flow by means of a sensitive FLAP in the tubular glass directly in the path of the liquid. Now the serviceman can accurately analyze the functions of the expansion valve by the action or position of the flow-responsive flap.

All E-Z-See Liquid Indicators are E-Z to see thru; positively leakproof; perfectly safe for pressures to 500 psi. In sizes 1/4" to 1 1/4"—plus new larger sizes in 1 1/2" to 1 3/4".

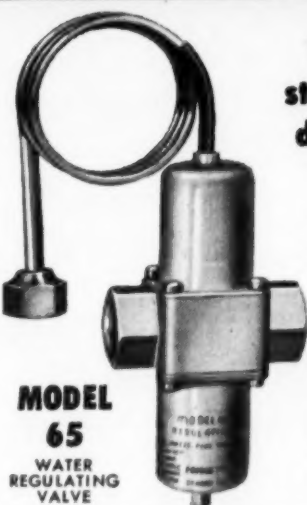


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TYPE 277 TYPE 278

REMCO
INCORPORATED
ZELLENFELD, PENNSYLVANIA

CARRIED IN STOCK BY LEADING WHOLESALEERS EVERYWHERE



MODEL 65
WATER REGULATING VALVE

This valve
stays clean in
dirty water!

The exclusive self-cleaning action of the A-P Model 65 Water Regulating Valve provides completely trouble-free operation — even in very dirty water! Available in 1/2", 3/4", 1" sizes. 2.7 to 42 gpm capacities. Write for complete details.



Plastic valve shoe floats on stem. Bevel design assures clean "wipe" of seat.

Valve starting to close. Note how bevel allows shoe to "hug" seat.

Valve fully closed. Shoe wipes seat clean at every cycle.

Thermostatic Expansion Valves Automatic Expansion Valves Filters and Driers Solenoid Valves ... For air... liquids ... gases... refrigerants Pressure-Regulating Valves Control-Valves Water-Regulating Valves Pressure-Limiting Valves

DEPENDABLE Controls

Tenney's on the Move!



...with top-flight refrigeration equipment like this unit cooler—backed by the finest engineering and a fair, rock-solid distributor policy.

Interested...?

Talk it over with

Tenney
ENGINEERING, INCORPORATED
Newark, New Jersey

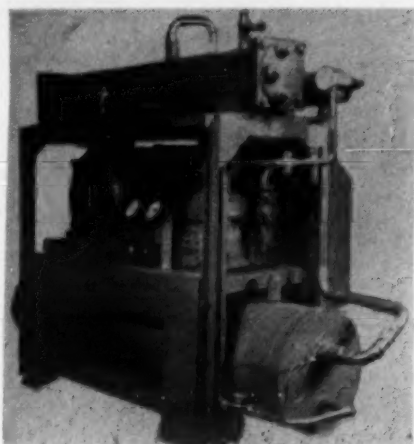
USE THE COUPON!

For "easy-to-get" product information... use coupon in the "Information Center" form.

What's New

When requesting further information on new products, please use "Information Center" form.

Baker Liquid Chillers Range from 10 to 60 Hp.



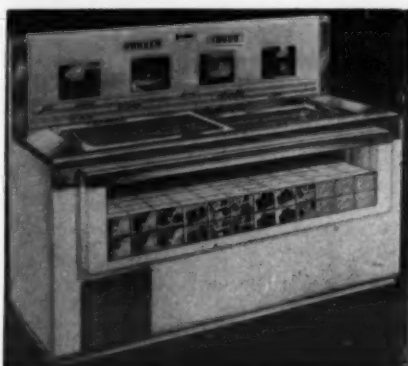
KEY NO. C-430

SOUTH WINDHAM, Me. — A liquid chiller line in sizes from 10 to 60 hp., giving water cooling capacities of 22 g.p.m. to 160 g.p.m. through a 10° cooling range has been introduced by the Baker Refrigeration Corp. here.

This liquid chilling unit is pre-engineered, fabricated, and completely assembled at the factory, said Mark E. Mooney, Baker vice president. Unit sizes from 30 to 60 hp. can be

fabricated and shipped knocked down at the customer's option to accommodate installation requirements.

Component parts furnished in the complete assembly include a compressor, motor, gauge board assembly, dual pressure control, condenser, chiller, and heat exchanger mounted on a structural steel base and frame.



KEY NO. C-431

The P-19 frozen food and ice cream merchandiser case manufactured by Jordan Refrigerator Co., Philadelphia, features new panoramic vision front. For use in small or large stores it presents a well-illuminated display. Shown as an advance model at the recent Jordan national sales conference, it is now in production. It will be shown at the Frozen Food Exposition, Grand Central Palace, New York City, April 23.

Summer Conditioners Offer Versatility, Compactness

KEY NO. C-432

DETROIT—Versatile line of summer air conditioners that can be installed as residential, store, or room coolers has been introduced by Coole-Ette, Inc. here in 2 and 3-hp. sizes.

Claimed to be the most compact unit on the market, the basic model measures 25 in. wide by 21 in. deep by 40½ in. high in both the 2 and 3-hp. sizes.

The line will be priced "competitive with the lowest cost units" and distributed through regular wholesale channels, the manufacturer stated.

The Cool-Ette firm has been organized by Emanuel Feinberg, well known Detroit who at one time headed up American Thermal Industries, Inc., air conditioning manufacturer. For several years he has been a manufacturers' agent here.

Designated as 1-R200B and 1-R300B, these basic units are designed primarily for use with a forced air heating system. Two types of blower sections are also available to incorporate with the basic unit.

A centrifugal blower section can be installed on top of the basic unit to make it a conventional package store cooler with a height of 80½ in. If desired, the blower section can be installed beside the cooling section to give a cabinet measuring 25 in. wide by 42 in. deep by 40½ in. high. With either of these arrangements the model numbers for the 2 and 3-hp. sizes are 1-R200F and 1-R300F, respectively.

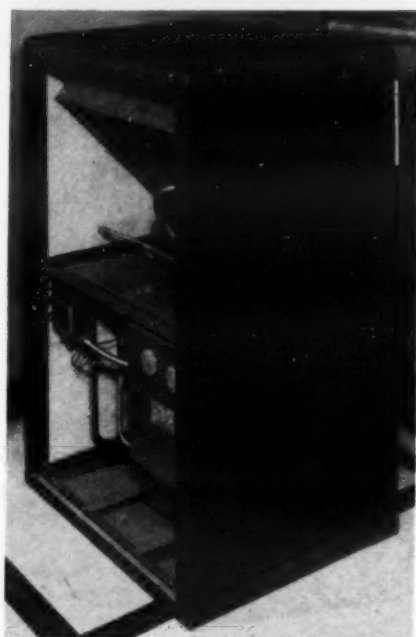
Also available for the basic unit is propeller fan section which fits on top to make a console type room cooler. Designated as models 1-R200FP and 1-R300FP, these units are 25 in. wide by 21 in. deep by 46 in. high.

The basic unit lends itself also to single or multiple installations and can be readily suspended from the ceiling, the manufacturer also points out.

Units employ a Tecumseh hermetic compressor and a cleanable type water-cooled condenser. The refrigerant is "Freon-22" and the 2 and 3-hp. units have a capacity rating of 24,088 B.t.u./hr. and 36,040 B.t.u./hr., respectively, at ASRE conditions.

Controls include a duct-type cooling thermostat, automatic starter, summer-winter switch, high pressure cut-out, and water regulating valve.

Cabinet, which has a gray blue hammered finish, consists of 22 gauge



steel panels assembled on a steel angle frame. Panels are insulated with Fiberglas for both temperature and sound.

Top and side panel openings of the basic unit are identical. Also available is a filter section which fits these panel openings.

Ice Shaving Machine

Designed for Counter Use

KEY NO. C-433

NEW YORK CITY—Ice Appliances, Inc. announces a new

"Snow-Ice" ice shaving machine for counter use. Standing 30 in. high and occupying only 11½ in. by 12½ in. of counter space, "Snow-Ice" has been especially designed for "Snow Balls" and "Snow Cones."

Engineered for immediate response at the touch of a lever, "Snow-Ice" produces the desired amount of snow

instantaneously.

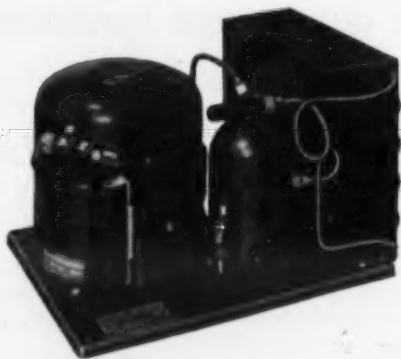


where Quiet is important SERVEL SUPERMETIC wins top preference

Here are hermetic condensing units built to literally soak up annoying noise... specially designed to smother vibration. Here, in fact, is ear-soothing smoothness that makes Servel Supermetic its own best "salesman."

Quiet operation is just one of many Servel superiorities that are setting new standards in the commercial refrigeration and air-conditioning fields.

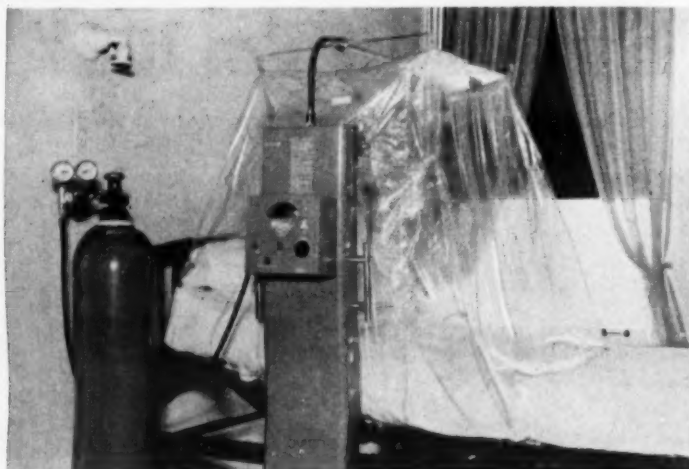
For the whole story, ask your near-by Authorized Servel Wholesaler or write today to Servel, Inc., Electric Refrigeration Division, Evansville 20, Indiana.



32 SUPER-QUIET SUPERMETIC MODELS — backed by Servel's low-cost Factory-Extended Warranty—best meet every commercial refrigeration requirement from ¼ H.P. through 3 H.P.

Servel

THE NAME TO WATCH FOR GREAT ADVANCES
IN REFRIGERATION AND AIR CONDITIONING



Leading manufacturers of oxygen therapy equipment for hospitals use Servel Power Units because of their extreme quiet. One such maker describes Supermetics as "almost noiseless."

For the same reason, Servel Supermetics are the preferred equipment in thousands of Room Air Conditioners in homes, hospitals, motels and offices.

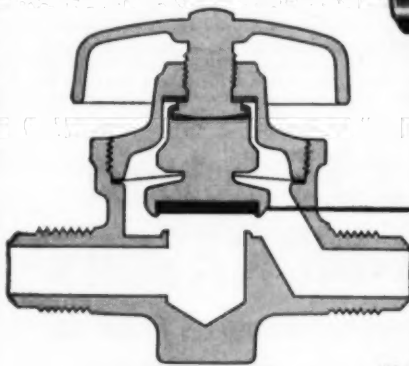


ZONES OF QUIET

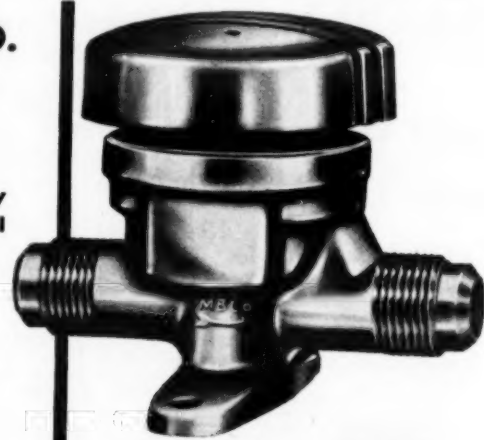
- ★ Built-in, force-feed oiling system with return oil-flow down power unit walls soundproof movement of working parts.
- ★ Flexible internal spring mountings cushion and absorb vibration.
- ★ Fully enclosed motor-compressor assembly and unique muffler design make additional contributions to silent operation.
- ★ Quality construction and precision-fitted parts insure continued quiet performance.

MUELLER BRASS CO. PACKLESS LINE VALVES

a fine valve you can heartily
recommend in any commercial
refrigeration installation.



98-A



tough, resilient molded nylon
stem disc insures positive
shut-off

Mueller Brass Co. STREAMLINE Packless Line Valves are the safe, economical and reliable forged brass valves that help increase the dependability of any commercial refrigeration system. Because of their durable construction they can take considerable punishment in difficult applications and still continue to give efficient, lasting service.

Good design and fine craftsmanship account for the splendid quality of these valves. The comfortable 2-1/2" diameter hand wheel provides good leverage for easy opening and closing. 1-1/2 turns of the hand wheel closes it. A neoprene back seal cushion prevents stem seizures and gives double protection against leakage. The nylon stem disc withstands regular charging board usage and it is

chemically inert to all standard low-pressure refrigerants. The disc is resilient and shuts off the flow easily and positively even when obstructions become lodged against it. Large metal diaphragms have been pressure-tested for 100,000 openings without a failure. A "Full-Flo" seat area and refrigerant passage virtually eliminates pressure drop.

STREAMLINE Packless Line Valves are sturdy and compact—only 3" high—with in-line ports for quick, easy installation. They are available in 1/4", 3/8", 1/2" and 5/8" sizes with flare or solder type end connections. Available from your refrigeration wholesaler.

Write for our latest catalog describing the complete line of Mueller Brass Co. STREAMLINE refrigeration products.



MUELLER BRASS CO. PORT HURON 9, MICHIGAN

What's New (Cont.)

Ansul Will Market New Desiccant and Drier

—KEY NO. C-434—

MARINETTE, Wis.—A new moisture absorbent desiccant and a new drier for eliminating moisture from refrigerating systems has been developed by Ansul Chemical Co. and will be made available soon.



The desiccant, "An-Drite" is the drying material in the new Ansul "T-Flo" drier. An-Drite and the T-Flo drier have applications not only for the refrigeration industry but for all other industries in which excessive moisture affects machine performance. These include electrical transformers for telephone lines, gasoline carburetors, natural and manufactured gas lines, and others.

The drier, with a distinctive silhouette of the letter "T," embodies a

new principle of design. Because of interchangeability of all size driers and connectors, it is simple to install and easy to replace, the company says.

The connectors do not have to be removed from the line when changing driers.

The T-Flo is leak tested with nitrogen at 300 lb. pressure. It may be hand or wrench-tightened, through use of a new gasket principle.

The drier can be installed by either standard flare or solder connections.

An-Drite, the new desiccant, is a chemically treated gelatinous aluminum oxide hydrate in the form of 1/8-in. diameter spheres. Powdering has been eliminated by a special process, Ansul patent pending. The desiccant will not plug or channel and is efficient at temperatures ranging up to 140° F., it is said. It is non-corrosive.

The T-Flo drier is available in 8, 12, 20, and 30-cu. in. sizes. Seven sizes of T-connectors, ranging from 1/4 to 3/8 in. are provided. Because of the interchangeability feature, 28 different drier combinations may be obtained by the four size drier units and the seven T-connectors. Purpose of this feature is to facilitate stocking for the service contractor and to reduce excess inventory for the wholesaler.

The drier will be sold exclusively through refrigeration wholesalers.



Heat-X-Changer Makes Water Cooler Line



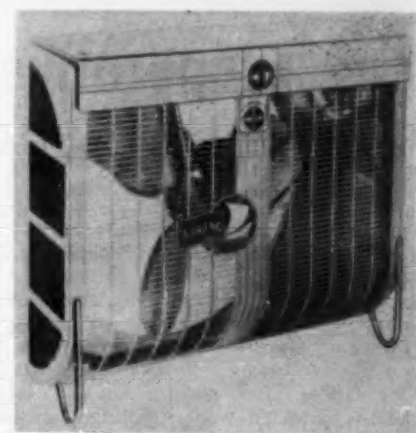
—KEY NO. C-436—

BREWSTER, N. Y.—The Heat-X-Changer Co. here now manufactures a line of instantaneous self-contained water coolers with full range of capacities from 10 to 40 g.p.h.

These instantaneous coolers eliminate the need for storage tanks, supplying cold water only when needed. They can be used as either remote or on-the-spot installations, and are available with or without glass filler.

Water and refrigerant tubes cast into a solid aluminum block provide for sufficient holdover capacity to eliminate short cycling and sufficient strength to prevent freeze-up damage, the company says.

Installation involves connecting water lines and plugging in the electric extension cord.



22-In. Window Fan Offered By Viking for Home Use

—KEY NO. C-437—

CLEVELAND — A 22-in. window fan featuring a safety grill, two-speed control, and improved design is being offered by the Viking Air Conditioning Corp. this year.

Called the Viking "944," the fan is claimed to move 3,100 c.f.m. of air which, according to the manufacturer, is "the largest capacity practical for homes." It is finished in "seafoam blue."

An automatic timer is optional equipment with the fan. The timer can be installed at the dealer's store.

Viking salesmen are using a series of full color stereopticon slides to illustrate the important features of the unit, the manufacturer said. With each fan, the dealer receives one "Vadnit" (Viking Advertising Unit) worth \$3 on 50/50 cooperative advertising.

IDEAL Speed-Freeze PRODUCTS

BEVERAGE COOLERS AND INSTANTANEOUS DRAFT BEER COOLERS.
(With Refrigerated Faucets)

WRITE

IDEAL COOLER CORPORATION
2953 EASTON AVE. • ST. LOUIS 8, MO.

Easel Mounted Fan Can Be Tilted at Any Angle

—KEY NO. C-435—

DAYTON—An easel-mounted fan that can be tilted at any angle and installed on the floor, table, wall, or in a window has been announced by the Lau Blower Co. here.

Called the "Tilta-Breez," the fan comes in 12, 16, and 20-in. sizes. A carrying handle makes it portable. Adjustable metal spacer panels are available with all three models for sash window installations. Fans may

Information Center

For more information on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

What's New or Current Literature Available

Key No.	Key No.
Key No.	Key No.
Key No.	Key No.
Key No.	Key No.

Products Advertised
(list name, page, and issue date)

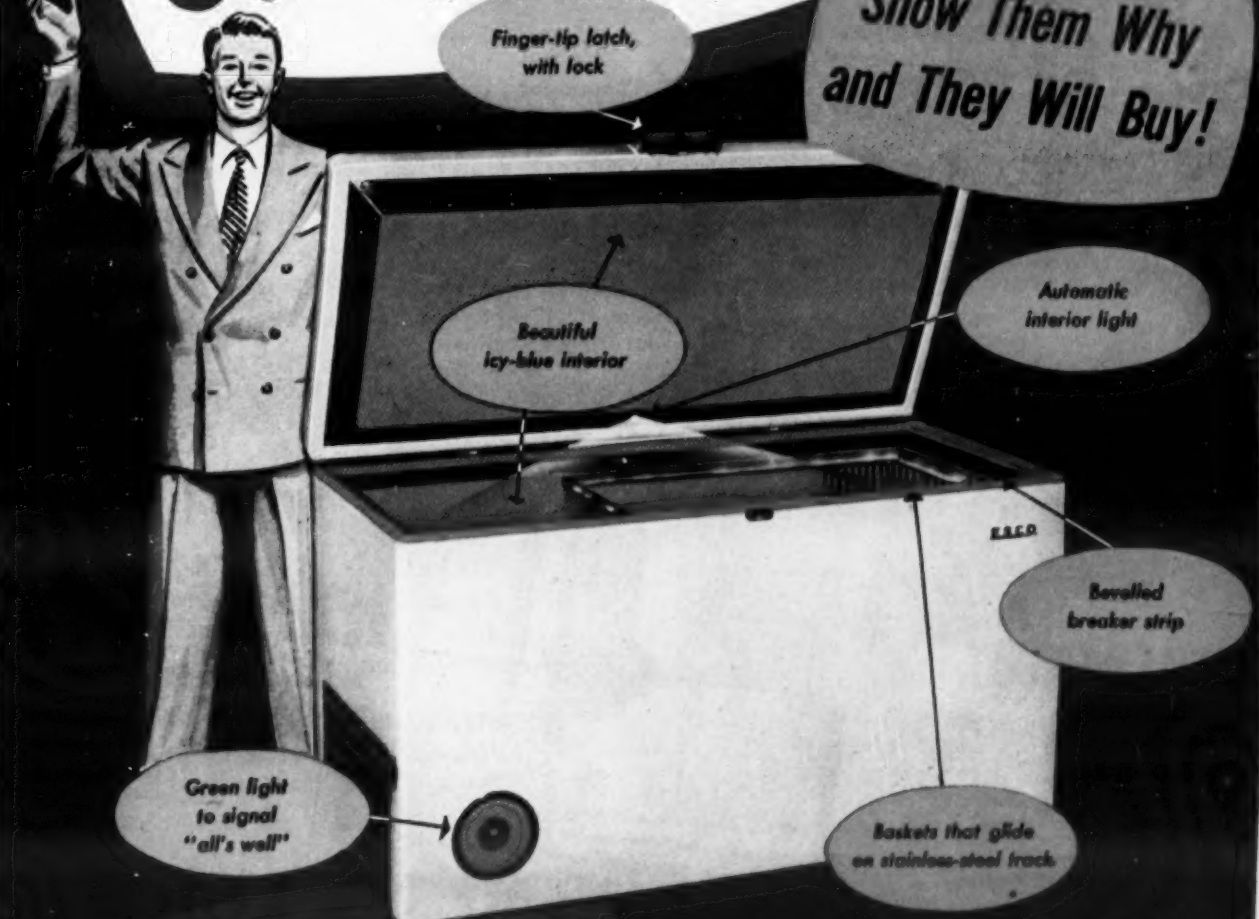
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AIR CONDITIONING & REFRIGERATION NEWS
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ESCO Freezers Sell on Facts



ESCO FREEZERS ARE:

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- Backed by colorful descriptive literature
- Backed by over twenty-five years of "know-how"

COMPLETELY NEW:

- Beautiful icy-blue interior
- Finger-tip latch, with lock
- Automatic interior light
- Bevelled breaker strip
- Easy-lift lid, counterbalanced outside with spring-type hinges.
- Baskets that glide on a stainless-steel track
- Always visible green light to signal "all's well"

Alert dealers everywhere are cashing in on the strong acceptance of Escro Freezers by customers that demand real value—at reasonable cost. Escro Freezers sell because they're styled right, built right and priced right.

Escro Freezers come in 5 handsome models suitable for any needs—12, 16, 20, 24 and 36 cu. ft. Size for size—dollar for dollar—Escro Freezers give both you and your customer more for the money!

Dealer inquiries invited. Send for literature and prices today!

ESCO CABINET COMPANY
West Chester, Pa.

Evaporative Condensers

Their Selection, Installation, Maintenance

By John Engalitcheff, Jr., President, Baltimore Aircoil Co., Inc.

On some existing installations, it may be advantageous to operate an evaporative condenser in conjunction with the existing shell and tube condenser. This may be due to one or more of the following reasons: Increased water and/or sewerage costs, ordinances that require the use of some form of water saving equipment or the need for additional capacity.

When additional capacity is re-

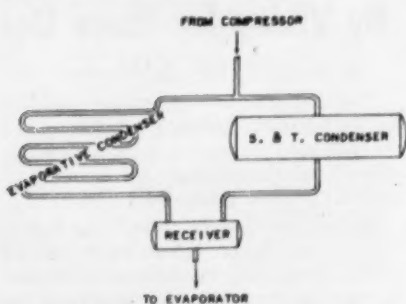


FIG. 15—Never connect an evaporative condenser in parallel with an existing shell-and-tube condenser. Correct hookup is shown in Fig. 17.

quired, and the condition of the existing shell and tube condenser does not warrant its discard, it may be advantageous to obtain the additional capacity with an evaporative condenser, thus operating the evaporative condenser in conjunction with the shell and tube condenser.

The combination of the two types of condensers is particularly advan-

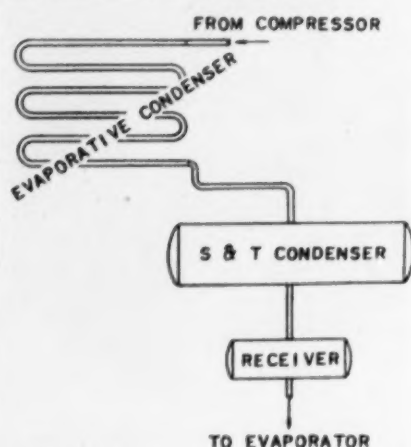


FIG. 16—Evaporative condenser should not be connected ahead of shell-and-tube condenser. Operating difficulties may result.

tageous on existing installations with a variable load. In these cases, the evaporative condenser could be selected to handle the normal load with the shell and tube acting as a supplement to handle the excess load, which is over and above the evaporative condenser capacity during full load conditions.

In connecting the evaporative condenser in conjunction with shell and tube, it must be remembered that they have different pressure drop characteristics. Consequently, they never should be connected in parallel as shown on Fig. 15.

Fig. 16 shows the evaporative con-

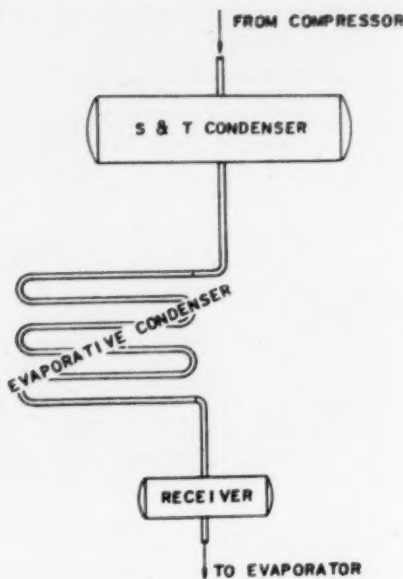


FIG. 17—Right way of connecting evaporative condenser in series with shell-and-tube condenser puts the "evap" after the shell-and-tube condenser.

denser in series and ahead of the shell and tube condenser. This method is not recommended.

For the shell and tube to operate effectively under full load conditions, under this method, it is necessary to "blow through" the evaporative condenser, which is contrary to evaporative condenser design. Therefore, this method may result in operating difficulties and it may be impossible to obtain desired combined capacity.

Fig. 17 shows the right way of connecting; and in this diagram the shell and tube condenser is shown in series with and ahead of the evaporative condenser.

In this manner, the shell and tube condenser, being a low pressure drop

piece of equipment, will "blow through" either under load or no load conditions. This method assures that each condenser will take its portion of the load and will deliver full capacity at all times when it is needed.

(To Be Continued)

Beardsley Joins Delavan As Plant Sales Engineer

WEST DES MOINES, Iowa—Delavan Mfg. Co. here has announced the appointment of Lee N. Beardsley of Chicago as factory sales engineer.

Beardsley will sell Delavan products exclusively in Wisconsin, northern Illinois, Indiana, and western Michigan. In Illinois, his territory will extend from Springfield north.

Before joining Delavan, Beardsley was sales engineer for the field control division of H. D. Conkey Co. for several years.

Delavan manufactures a line of replacement parts for commercial refrigerator compressors. The firm also is a producer of oil burner nozzles and a supplier of jet aircraft engine nozzles. In addition, Delavan manufactures a complete line of industrial spray nozzles, plus agricultural spray nozzles and accessories.

36-Page Estimating Catalog Released by Blazer & Son

PASSAIC, N. J.—The spring and summer 1953 estimating catalog of M. Blazer & Son here, wholesaler and manufacturer of heating, ventilation, refrigeration, and air conditioning equipment and supplies, has just been released.

This 36-page pricing guide is said to cover over 80% of the items normally used by contractors and engineers in the above fields.

"Descriptive sales talk has been eliminated and data has been reduced to that bare minimum required to make a selection," the company noted.

Covered are fans, blowers, compressors, accessories, fittings, pumps, coils, condensers, valves, motors, V-belt drives, grilles and registers, air conditioners, chillers, etc.

Weinburg Heads Atlanta Branch for Vilter Mfg.

MILWAUKEE—The Vilter Mfg. Co. has recently announced the appointment of Irving Weinberg as district manager of its newly re-opened Atlanta branch office.

An alumnus of the University of Wisconsin, graduating with a B. S. in mechanical engineering, Weinberg joined the Vilter organization in 1945. Time spent in all shop and office departments has given him the well-rounded knowledge of refrigeration and air conditioning necessary to assist Vilter customers and distributors in his territory, comprising the states of Georgia, Alabama, Florida, and South Carolina.

Weinberg is currently an active member of the American Society of Refrigerating Engineers.

SLANTS on Service

"Slants on Service" is a handy "package" devised by the NEWS to meet the needs of its busy readers.

How One Serviceman Found Elusive Pinhole Leak

"A store had a small case run by a 1/4 hp. 'F-12' unit charged with 1 lb. of gas," recalls W. Tegner.

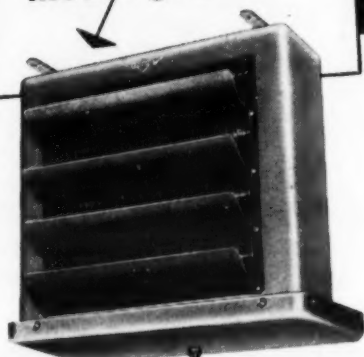
"I was called to check it as the temperature was rising. I found it was short of gas, charged it, and tested for leaks which I could not find. Three weeks later I was again called and again found it short of gas. I dumped in a pound of 'Freon' and after testing and still finding no leaks, I added some oil to the crankcase that contained a dye that would make leaks visible. (This is sold under various names.)

I stopped by three weeks later and sure enough I found the leak. It was a pinhole in one of the return bends. I removed the coil, repaired the leak, charged the unit again and although I have stopped by there several times and it happened a couple of years ago, I have never had any more complaints nor seen any evidence of its not working right," he says.

JUST ASK US!

Turn to "What's New" Page for useful information on new products.

LARKIN means good looks



LARKIN HUMI-TEMP UNIT

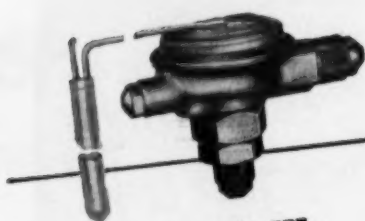
For clean, smart lines, satin-smooth finish, harmonious color and overall good looks—Larkin leads. Behind this beauty is the quality and performance that keeps Larkin out in front!

Manufacturers of the original Cross-Fin Coil • Humi-Temp Units • Frost-O-Trol Hot Gas Defroster • Evaporative Condensers • Cooling Towers • Air Conditioning Units and Coils • Direct Expansion Water Coolers • Heat Exchangers • Disseminator Pans.

WATCHDOG OF THE NATION'S FOOD SUPPLY
LARKIN COILS, INC.
519 MEMORIAL DR., S.E. • ATLANTA, GA.

Simplify Buying and Inventory DEAL with DETROIT

and take advantage
of ONE convenient source
for EVERY expansion valve need!



NO. 777

- Adjustable superheat
- Available with C, Z, or standard liquid charge
- Capacities—1/2 to 2 tons Freon-12
- Stainless steel and brass throughout
- Easy superheat adjustment
- Anchored capillary
- Interchangeable inlets 1/4 and 3/8 S.A.E.
- Cartridge assembly simplifies cleaning
- Available with equalizer connection



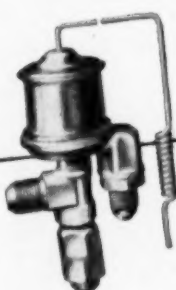
NOS. 786, 787, 788

- Adjustable superheat
- Gas charged for air conditioning applications
- Liquid "Z" charge for low temperature use (786 and 787)
- In-line connections
- Capacities 2 to 25 tons Freon-12
- Capacity easily changed on the job
- External equalizer connection



No. 673

- Adjustable superheat
- Stainless steel needle and seat
- Gas charged for motor overload protection and quick response
- Duraflex bellows resist corrosion and insure long, trouble-free service
- Monel inlet strainer
- Hermetically sealed joints
- 3/8 S.A.E. inlet, 1/4 F.P.T. and 1/2 S.A.E. outlet
- Capacities—1.2 to 3.6 tons Freon-12



No. 573

- Adjustable superheat
- Gas charged for motor overload protection
- Stainless steel needle and seat
- Hermetically sealed joints
- Monel inlet strainer
- Forged brass body
- 1/4 or 3/8 S.A.E. inlet, 1/4 F.P.T. or 1/2 S.A.E. outlet
- Capacities—1/2 and 1 ton Freon-12



DETROIT Controls CORPORATION

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Division of AMERICAN RADIATOR & Standard Sanitary Corporation

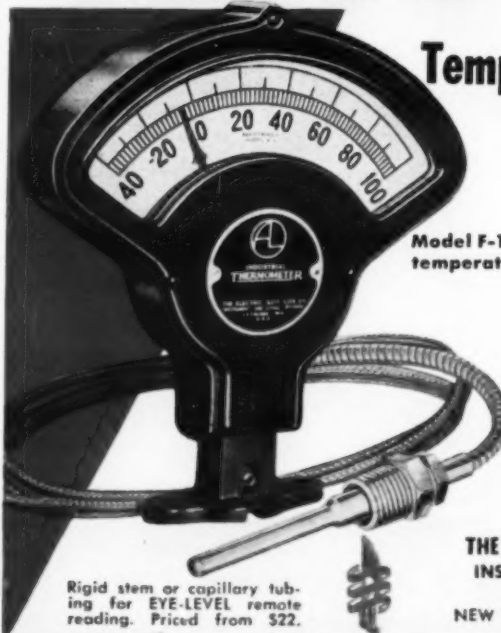
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temperature indicator

3-way
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Auto-Lite offers many thermometer styles, permitting plant-wide temperature observation at low cost. Standard temperature ranges from minus 60°F to plus 750°F. Send for latest catalog showing various types.

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TEMPERATURE INDICATORS & RECORDERS

Commercial Refrigeration

Penn Control Show To Hit Midwest Trail April 30

GOSHEN, Ind.—A new series of Penn educational shows, designed as a service to heating and refrigeration engineers and servicemen, will begin in Lincoln, Neb. on April 30 and travel through several midwestern states, according to R. H. Luscombe, general sales manager of Penn Controls, Inc.

The specially designed show has been touring the western states, offering a dramatic visual presentation of the application, installation, and servicing of automatic controls. Included in the equipment, which travels in a specially built truck, are giant controls which actually operate, colored slides, charts, and operating systems demonstrators.

At the present, Penn "traveling" Heating Control Show is scheduled to appear in the following cities: Lincoln, Neb. on April 30; Omaha, Neb. on May 4; Sioux City, Iowa on May 7; Des Moines, Iowa on May 11; Minneapolis on May 14; Duluth, Minn. on May 18; LaCrosse, Wis. on May 21; Waterloo, Iowa on May 25; Cedar Rapids, Iowa on May 28; Davenport, Iowa on June 1; Peoria, Ill. on June 4; Chicago on June 8 and June 10; Milwaukee on June 15; Green Bay, Wis. on June 18; Grand Rapids, Mich. on June 22; and Detroit on June 24.

The "traveling" Refrigeration Control Show is scheduled to appear in the following cities: Lincoln, Neb. on May 1; Omaha, Neb. on May 5; Sioux City, Iowa on May 8; Des Moines, Iowa on May 12; Minneapolis on May 15; Duluth, Minn. on May 19; LaCrosse, Wis. on May 22; Waterloo, Iowa on May 26; Cedar Rapids, Iowa on May 29; Davenport, Iowa on June 2; Peoria, Ill. on June 5; Chicago on June 9 and June 11; Milwaukee on June 16; Green Bay, Wis. on June 19; Grand Rapids, Mich. on June 23; and Detroit on June 25.



C. J. Requard A. B. McKinley

McKinley and Requard Appointed by Victor

HAGERSTOWN, Md.—J. K. Noel, Jr., vice president in charge of sales, Victor Products Corp., has announced the addition to his staff of A. B. McKinley as commercial sales manager.

At the same time, Noel announced the appointment of Charles J. Requard as district sales manager of the New England territory.

Noel said McKinley's position is a new one in the Victor organization and was established as part of the company's expanded program in both the commercial and appliance fields. Requard's appointment is also in line with Victor's expanded activity.

McKinley's entire business career has been in the refrigeration field. For the past 20 years, he has served in management capacities.

He was most recently commercial sales manager for the Philadelphia branch of Frigidaire.

In addition to his headquarters' duties, McKinley will spend a large part of his time in the field assisting and directing Victor sales representatives. He will also work closely with Victor distributors.

Requard's territory is comprised of Maine, Vermont, New Hampshire, Massachusetts, and Rhode Island, and parts of Connecticut and New York.

Says 20,000 Groceries To Adopt Self-Service In '53

CHICAGO—Dave Shulman, vice president in charge of sales for S. A. Hirsh Mfg. Co., shelving manufacturer, predicted recently that about 10% of the 200,000 groceries in the country not now using the self-service method were planning to switch to this type of operation in 1953.

Shulman said his forecast was based on sales figures and booked orders. He added that many drug and hardware stores were adopting supermarket techniques of retailing.

Federal Refrigerator Opens Belleville Assembly Plant

WAUKESHA, Wis.—A new assembly plant for general and bakery refrigerators has been completed at Belleville, Wis., about 15 miles south of Madison, the Federal Refrigerator Mfg. Co. here announced recently.

The plant is of one floor modern advanced design, the company said. Federal is currently making more than 50 models of self-service display cases, freezers, merchandisers, walk-ins, and bakery refrigerators and freezers.

Dallas Firm Gets Charter

DALLAS—Dal-Tex Air Conditioning Co., Inc. here has been granted a charter for 50 years to engage in the air conditioning and heating business. Capital stock: \$1,000 (pd. \$600). Incorporators: Emma A. Lomen, Cleon Thomasson, and Burton Kenneth Wallace.



W. C. Mueller A. P. Boehmer

Dole Appoints Boehmer As Chief Engineer and Mueller as Ad Manager

CHICAGO—Dole Refrigerating Co. here announces the appointment of Andrew P. Boehmer as chief engineer and William C. Mueller as advertising manager.

Boehmer was recently director of the power laboratory in the College of Engineering of the University of Iowa, a director of graduate students in the field of refrigeration, air conditioning, and power plants. He was formerly with Mills Industries, their test engineer, applications engineer, and assistant sales manager.

Mueller served for 10 years with Kraft Foods Co. in Chicago as an advertising manager and was appointed director of public relations of the Chamber of Commerce at San Diego, Calif. after his discharge from recalled Naval service. He is a graduate of Northwestern university and the Ray School of Advertising in Chicago.

Here's a Supermarket That Thrives on 'Best Food Plan In Texas'

SAN ANTONIO—Promoting the sale of meats and frozen foods in quantity lots for home freezer owners is one of the most important things he has done to draw attention to his market, claims Ellsworth Lorms, who operates the Model Market in Highland Hills here.

Lorms, who opened his supermarket last August, advertises that he has the "best food plan in Texas." He advised the public to "buy your freezer anywhere. Let Model fill it at savings you've never heard of."

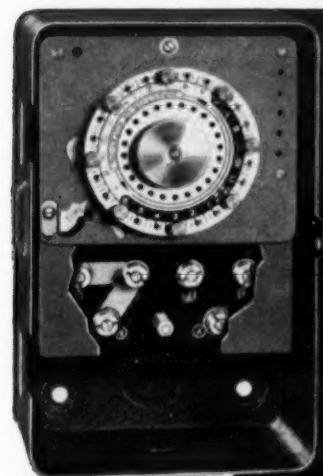
He says he is selling 10 of 12 beef carcasses and more than 100 dozen packages of frozen food in dozen lots per week. He charges 5 cents a pound for cutting and wrapping the meat.

An undecided customer can take home a sample cut of meat to try it out before purchasing an entire carcass. He is not obliged to buy the carcass unless he is satisfied with the sample, Lorms said.

Selling meat in large quantities does not drive people away from the store for long periods, Lorms finds. Even though they buy an entire beef carcass, they drop in every once in a while for lamb chops, ham, or something else to give their fare a little variety, he explained.

JUST ASK US

Turn to "What's New" Page for useful information on new products.



300-MB Series Time Switches for compressor shut-down, electric heater defrosting, hot gas or reverse cycle applications.

for accurate
dependable
defrosting time
switches

specify
paragon

Dependable, accurate defrosting is vital to good performance. That's why, for original equipment or for replacement, growing numbers of top-flight designers and service engineers demand Paragon defrosting time switches. That's why 96% of the commercial refrigeration manufacturers using automatic defrosting specify Paragon as standard equipment.

**PARAGON
ELECTRIC COMPANY**
TWO RIVERS, WISCONSIN

World's largest exclusive manufacturer of time controls

Water Spray Controls



700 Series, 7-day calendar dial time switches provide individual program settings for each day in week.



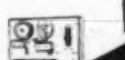
TD-350 Beverage Cooler "defrost-it" can be used with all makes and most models of dry type coolers — helps maintain lower temperatures.

"defrost-it"

Attic & Window Fan Timers

Dehumidifier Timer

Time/Pressure Switches



Picture Window Beauty ENGINEERED FOR DUTY! A NEW KOCH REACH-IN WITH CRYSTAL CLEAR SLIDING DOORS

KOCH GIVES YOU MORE . . . now a 25-cu. ft. reach-in with Thermopane sliding glass doors . . . a natural for picture-perfect perishable foods.

KOCH GIVES YOU MORE . . . more SELLING POINTS. Efficient utilization of floor space is a strong point for this reach-in refrigerator because THERE IS NO OPENING INTO THE AISLES.

KOCH GIVES YOU MORE . . . KOCH engineering means best construction at BEST prices . . . and at BEST PROFITS for you. These doors, framed in polished aluminum and plastic, are built for perfect operation. They are top-suspended, easy-rolling, tight-sealing and beautiful appearing.

KOCH GIVES YOU MORE . . . more CUSTOMERS . . . more and better profits. You can add to your profit picture with these KOCH reach-ins. Write or wire factory for franchise information.

THESE DOORS ARE ENGINEERED! SPACE-engineered for efficient utilization of floor area. NO OPENING INTO AISLES . . . make the utmost use of precious floor space.

THESE DOORS ARE ENGINEERED! Grip-action aluminum handles for effortless use. Bumper guards protect against finger mashing.

THESE DOORS ARE ENGINEERED! Designed for strength and appearance. Assembly is rigid, with permanent, no-sag features. Glass is sealed in rubber to resist shock.

THESE DOORS ARE ENGINEERED! Almost self-closing, doors slide easily but they will not bounce open. Specially engineered track means doors stay closed until next opening.

Write or wire today for franchise availability and complete information.

KOCH refrigerators, inc.
NORTH KANSAS CITY 16, MO.



Calculating Residential Cooling Load (2)

Equipment Sized by '24-Hr. Method' Is Smaller, Cheaper To Operate, Quieter, and Holds Down Humidity, According to Carrier Engineers

By E. P. Palmatier and A. W. Carroll, Carrier Corp.*

[This is the second instalment of a three-part article discussing the "24-hour method" of calculating the cooling load for residential air conditioning devised by Carrier Corp. In the first article the authors revealed results of temperature tests made in Syracuse residences that were neither heated or cooled. These results showed that although indoor temperature variations followed a pattern fairly similar to outdoor temperature changes, the amount of change indoors was much less—a maximum of 7° in these tests.]

It will be recalled that during these experiments the houses were unheated and uncooled. Also that the objective was to estimate, from an analysis of the results, the magnitude of the thermal storage so that this heat might be deducted from the hourly heat gain estimated by the familiar instantaneous method. However, the character of the results, particularly the small variation of inside temperature, suggested an entirely new approach.

It was reasoned that, under maximum summer conditions requiring cooling, a residence that is continuously refrigerated by equipment of

sufficient size to remove the computed 24-hour heat gain will display inside temperature variations the same as the uncooled and unheated houses subjected to test. Furthermore, the size of equipment so selected will be the smallest and least expensive that may be safely applied to the house.

It should be pointed out that the daily heat gain must be computed for an average inside temperature, usually 74° or 75° F. rather than the maximum allowable value and that it is to be expected that under maximum conditions the inside temperature will vary about 2½° to 3° F. each side of the average room condition. This fluctuation will have characteristics identical to those observed in the unheated test houses; that is, the minimum will occur in the early morning around 6 to 7 a.m. and the maximum will be reached at between 8 and 10 p.m.

The usual room thermostat may be used but it is set in hot weather at about 72° F. or 73° F. with the expectation that the temperature may reach a peak value of 77° or 78° F. in the late evening in the very hottest weather. On peak days the equipment runs practically 24 hours while in less severe weather it runs 30% to 40% more hours during the day than equipment selected by older methods.

The question may come to mind as to whether the design of a residential cooling system for a fluctuating temperature isn't a step backward rather than an advance. Actually the disadvantages, if they exist at all, are far outweighed by several important advantages of the 24-hour method. These are in addition to the obvious saving in equipment cost.

In the first place, according to tests conducted by the American Society of Heating and Ventilating Engineers which have now become an accepted part of the air conditioning industry's basic knowledge, comfort depends on a combination of temperature and humidity. Virtually everyone feels completely comfortable at an "effective temperature" which presents many different combinations of actual temperature and humidity. It may also be noted that maximum comfort conditions for the great majority of people span a range of several degrees of effective temperature.

Many Prefer Low Temperatures For Night Sleeping

In addition, millions of people during the heating season by preference lower the temperature at night for sleeping. They do so to achieve certain fuel economies and also because they prefer to sleep under



covers in a slightly cooler temperature. It will be recalled that the 24-hour design method lets the house pull down in temperature during the night in preparation for the heat of the following day.

Then, too, a slight feeling of coolness upon arising is invigorating to many people, while at night when one is tired a slightly higher room temperature is quite acceptable providing humidity is low, particularly if it is very warm outside. But remember the maximum temperature variation occurs only in the most severe summer weather. Most of the time the daily indoor swing will be only 3° or 4°.

Secondly, the smaller, less costly system actually produces improved comfort by maintaining lower humidity. One of the most frequent complaints received from owners of larger cooling plants selected by older methods is that "clammy" or "damp cold" conditions are experienced. The reason for this is that the larger sized equipment runs infrequently and holds down the temperature but while the refrigeration units is off, the humidity climbs rapidly.

This is particularly true when the circulating fan is operated continuously. The moisture that collects on the cooling coil while the compressor runs does not build up sufficiently to run off the coil and down the drain before cooling stops. When refrigerator stops the coil comes back up to room temperature quickly and the moisture is re-evaporated into the house by the circulated air. Hence the house is cooled, but it is dehumidified only partially or not at all. The result is high humidities and a "damp cold" sensation.

Operating Costs Compared

Third, there is some evidence that the use of larger equipment may result in higher operating cost. One might say that the larger equipment runs less than the smaller plant selected by the 24-hour method and, since they both remove the same amount of heat, they should consume the same total power.

But the larger equipment will turn on and off, or "cycle," more frequently. Cycling results in wasted power for two reasons. First, there is a large inrush of electricity each time the compressor starts. Second, there is a delay after starting before the full refrigerating effect is being produced and power is used during this period. The fewer the starts, the less power will be wasted. Hence, the smaller equipment selected by the 24-hour method should operate more efficiently.

Smaller Equipment Offers Less Starting Noise

A secondary benefit, since starts and stops may be audible, is that the continuously running unit is less likely to be noticed.

These statements have already been checked by owner reaction and the acceptability of equipment sized by the "24-hour estimating method" has been demonstrated to our satisfaction by many installations made during the past two years. Careful tests on two residences last summer showed that our original assumptions were sound. Before getting into the details of the 24-hour cooling load estimate, let us summarize:

(1) It has been recognized by many that the majority of summer cooling units applied to residences are too big for the job.

(2) Some have realized that the fundamental reasons for this are:

(a) Transmission and solar heat gains represent practically the whole load in residence, and

(b) The thermal storage of the structure is of significant magnitude compared to heat gains.

(3) Experiments showed that unheated and uncooled homes when subjected to maximum solar effects and outside temperature swings and normally occupied, had internal temperature variations that seemed capable of acceptance.

(4) It was reasoned that a house continuously refrigerated at a rate capable of removing the daily (24

hour) heat gain computed for the maximum summer day would produce acceptable comfort conditions.

(5) This estimating method obviates the need to determine coincidence of loads, thermal storage, and time lags and simplifies the application estimates.

(6) Equipment selected by the 24-hour estimating method is smaller, less expensive, normally maintains lower humidities and is a better type of load for the power company.

Many 'Minor' Factors Considered In 24-Hour Method

The "24-Hour Load Calculation Method" was formulated from these basic considerations. It dictated capacities of refrigeration equipment in residences much smaller than previously used hourly heat gain estimates.

Additional factors were included in the method since such elements as roof overhang, wall color, roof treatment, and other design features could also affect the equipment by reducing capacities required. Experimental data showed that these factors were extremely consistent in their effect.

Overhanging Roof Can Have Major Effect

It will be recalled that the heat gain through both walls and windows which takes place because of direct solar radiation is integrated or summed up for the entire day. Also the temperature of exterior wall surfaces and direct solar gain through windows is computed from the radiation that falls on a vertical surface during the day. It might be thought that a 12-in. or 18-in. roof overhang would not offer much shade. But careful analysis of the way the shadow cast by such overhangs on walls and windows changed during the day shows that the effect is appreciable.

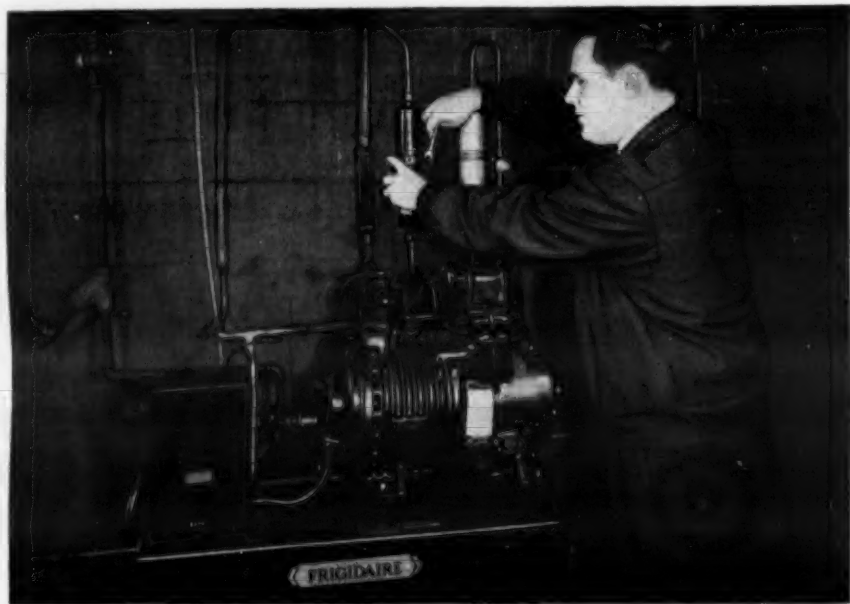
For example, even a small overhang shades south and east walls considerably at a time shortly before noon when the sun is nearing its highest point but is still somewhat east of due south. The picture changes minute by minute as the sun moves through the sky but the net result is a reduction of the solar effects on walls and windows.

When shading and other design factors were summed up and accounted for, field tests showed that the results predicted by the "24 Hour Method" checked the measured daily heat gain almost exactly.

So we find that to predict accurately the cooling capacity required for a given house, consideration must be given not just to the maximum temperature outside and the obvious shading of walls and windows. Rather the range of temperature, color of external wall surfacing, and the incidental shading of normal roof overhangs will affect equipment selection and are therefore a basic part of the estimating tables.

(To Be Continued)

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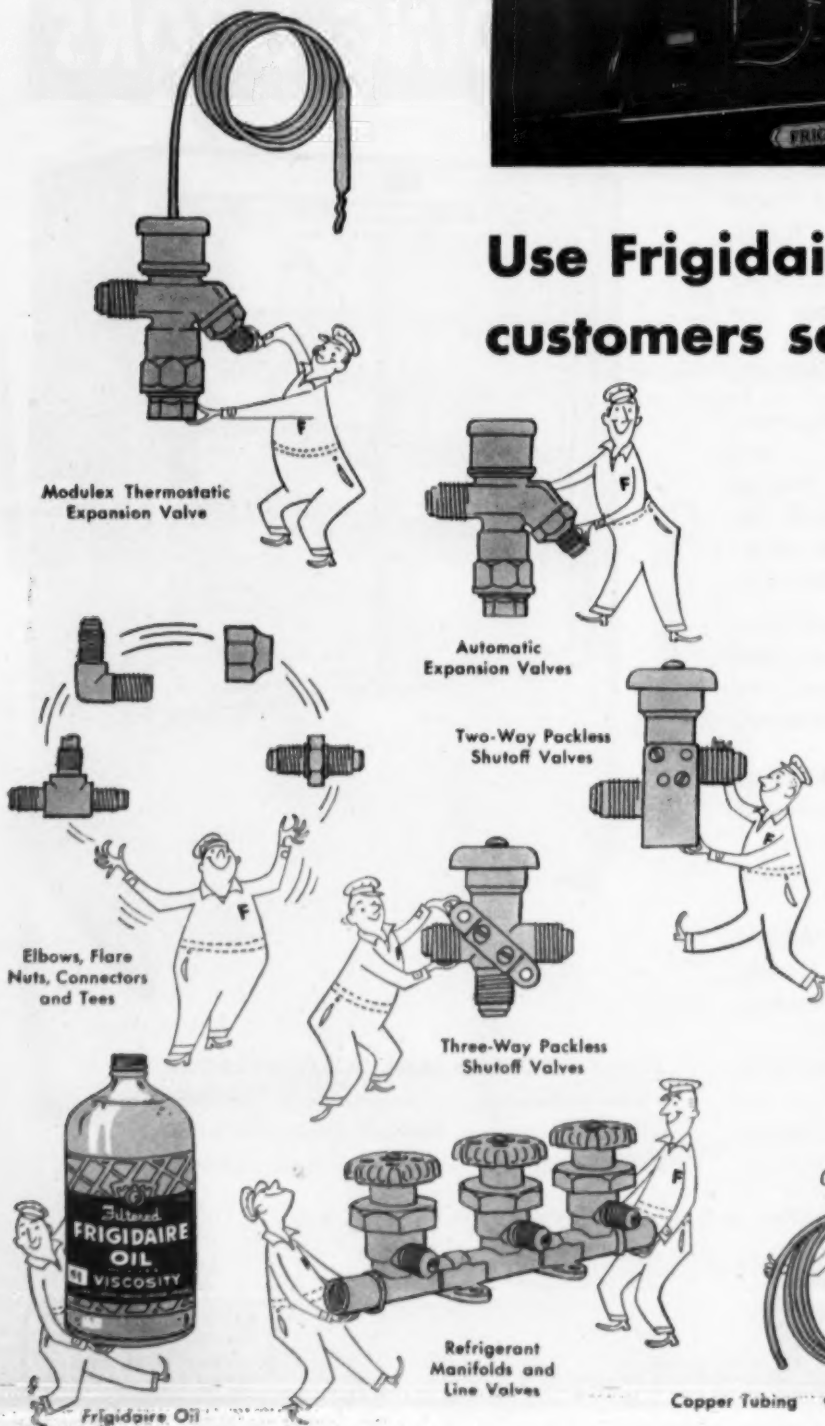
Here is a really complete line for every single need, and you get every part, every accessory from one single source to simplify ordering, stocking, and bookkeeping. They're obtainable quickly and easily from any one of the 42 district offices strategically located across the country.

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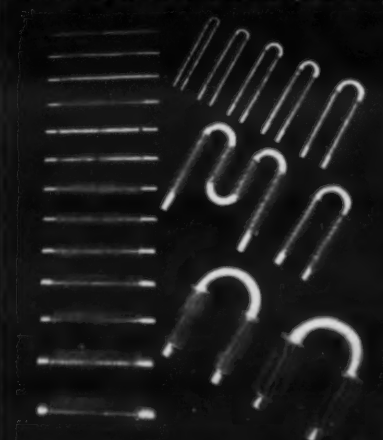
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Refrigeration Problems

and their solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

Conditions Affecting Capacity of A Condensing Unit

The reply to the following inquiry may be of interest to other readers who are not quite clear as to the relationship between the capacities of a condensing unit under different conditions of operation.

QUESTION:

A ton of refrigeration is based on 2,000 lbs. of ice melting at the rate of 12,000 B.t.u. per hour, but the temperatures in the applications of refrigerating machines are sometimes above the melting point of ice 32°, and sometimes, as for frozen foods, far below 32°. Therefore, isn't there a variation in the load according to the temperatures?

I would like to know if there is any method of calculating the capacity of a condensing unit in tons of refrigeration to a common standard. Is there a method of calculation or a set of standard factors that can be used?

ANSWER:

This question cannot be answered in a few words; but it can be said that the capacity of a condensing unit does vary from one installation to another. However, there are no standard factors that can be applied to the capacity of a condensing unit operating on one set of conditions to determine its capacity under another set of conditions.

Based on previous experience with a similar condensing unit, a rough estimate could be made, but even this would not be sufficiently accurate nor dependable enough for practical purposes.

The capacity of a condensing unit

is affected by a number of conditions under which the system is operating, and by the design and construction of the condensing unit itself. Thus, if we state the capacity of a condensing unit, we must specify those conditions under which the unit was operating when it developed the stated capacity. These factors are:

1. The evaporator temperature and the saturation pressure of the refrigerant. The capacity of the condensing unit is higher at the higher evaporator temperatures and suction pressures, and goes down as the evaporator temperature and pressure go down.

2. The superheat of the suction gas. The more the suction gas warms up or superheats between the evaporator and the compressor, the lower the compressor capacity is at the same suction pressure. This is because superheating reduces the density of the gas; consequently, less refrigerant by weight is pumped by the compressor.

3. The condensing temperature and pressure. The higher the condensing temperature and pressure, the lower is the condensing unit capacity, for the more difficult it is for the compressor to pump against high condensing (head) pressures, and the greater are the losses.

4. The temperature of the liquid refrigerant available for the expansion valve. Ordinarily, we think of the liquid refrigerant in the liquid line as being at the same temperature as the condensing temperature, but this is not necessarily true.

It may be warmer or it may be colder. If it is warmer, its refrigerating effect is lower; consequently, the over-all capacity of the system is reduced. If it is colder than condensing temperature, the capacity is increased.

5. The size (displacement) of the compressor and its design and construction. Obviously, the greater the compressor displacement, the greater its capacity.

Its design affects its "volumetric efficiency." Factors in compressor design are the fit of the pistons, "clearance volume" between the pistons and the valve plate, and the action of the suction and discharge valves. Another factor is the ability of the compressor to radiate or dissipate heat, and thus keep itself cool.

In addition to the above five conditions, we could also add pressure drop in the liquid and suction lines and in the evaporator, but these cannot be controlled by the condensing unit, so in stating its capacity, we assume that there is no pressure drop in either the liquid or suction lines or in the evaporator. In practice there will be some pressure drop, of course, and any pressure drop will reduce the capacity of the system.

THE STANDARD TON

Many years ago the refrigerating industry decided that it was cumbersome to have to be specifying the factors that affect capacity every time a capacity was stated, so they decided on what they called a "standard ton" of refrigeration, and standard conditions under which it would be produced.

When one pound of ice melts

(changes from ice at 32° F. to water, also at 32° F.), it absorbs 144 B.t.u., so it has a refrigerating effect of 144 B.t.u. A ton (2,000 lbs.) of ice, therefore, has a refrigerating effect of 288,000 B.t.u. If this ton of ice melts uniformly over a 24-hour period, it furnishes refrigeration at a rate of 288,000 B.t.u. per 24 hours, 12,000 B.t.u. per hour (288,000 ÷ 24), or 200 B.t.u. per minute (12,000 ÷ 60).

A refrigerating machine that would remove heat at a rate of 288,000 B.t.u. per 24 hours, 12,000 B.t.u. per hour, or 200 B.t.u. per minute was, therefore, defined as a one-ton machine; that is, having a refrigerating capacity equivalent to one ton of melting ice.

STANDARD TON CONDITIONS

The standard conditions under which this one-ton capacity is to be developed are:

1. Evaporator temperature 5° F. (For ammonia, this is a suction pressure of 19.6 p.s.i.g.; for methyl chloride, 6.5 p.s.i.g.; for "Freon-12," 11.8 p.s.i.g., etc.)

2. No superheat of the suction gas; that is, it gets to the compressor saturated at 5° F. Ammonia compressors are sometimes operated on "wet compression"; that is, with no superheating of the suction gas from the evaporator to the compressor suction manifold.

This is not good practice with the "Freons" or other oil soluble refrigerants.

3. Condensing temperature 86° F. For ammonia, this corresponds to a condensing or head pressure of 154.5 p.s.i.g.; for methyl chloride, 180 p.s.i.g.; for "Freon-12," 93.2 p.s.i.g., etc.

4. Liquid refrigerant available to the expansion valve at not more than 86° F., and not less than 85° F. (1° F. sub-cooling).

The displacement and efficiency of the compressor and other characteristics of the other parts of the system are not specified, for the standard ton may be applied to systems of all sizes, types, and efficiencies ranging from a small unit having a small fraction of a ton capacity to one having hundreds of tons capacity.

The capacity of the larger systems, say about 20 tons upward, is usually referred to on a tonnage basis. However, for small units, especially those of less than one-ton capacity, rating on a tonnage basis is cumbersome, so their capacities are usually expressed in B.t.u. per hour.

(To Be Continued)

Theimer Gets Southland Post

DALLAS — George M. Theimer has been appointed manager of the air conditioning and heating division of the Southland Supply Co., Inc.

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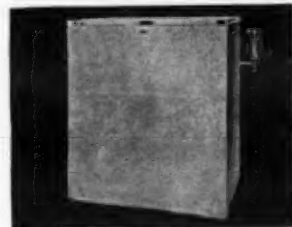
For Recognized Quality - Extra Gallons

Sell Your Condensing Unit

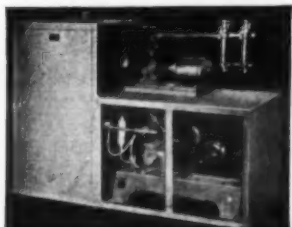
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Sell your condensing unit with remote models for new and replacement jobs—all applications. Capacities 10-1000 g.p.h.; storage 7-300 gals. Filters, Rectifier-Dechlorinators available for all sizes.

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safe—no acids or alkalis to harm the operator or ruin expensive equipment. Solvex Cleaner and Solvex Maintenance Formulas also are obtainable in granular bulk (grains) for larger jobs.

Virginia Smelting Company distributes two other Solvex products of interest to the industry. One is "CC" Coating, a waterproofing and rust-preventive compound—excellent for use where galvanizing has failed. The other is Ice Machine Cleaner Powder—for eliminating the lime, grease and dirt which

cause machines to turn out opaque, bad-smelling and bad-tasting ice.

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OFF THE CHEST

'FAST BUCK' OPERATOR A MENACE TO INDUSTRY

 B. P. Rhinefort Co.
Fort Worth, Texas

Editor:

I have read your editorial in the AIR CONDITIONING & REFRIGERATION NEWS "Beware the Ides of March and the Fast Buck Operator," and I want to compliment you to the fullest for the position in which you have taken and expressed your belief and feelings, as to the condition which is fast developing in one of the future's biggest fields in our industry.

This is becoming a very much discussed and aggravated subject. Having been associated in the heating and air conditioning field for the last 20 years, I have seen many pitfalls pro and con. We all know there has been many a good firm or company that has appeared on the horizon; then disappeared into the sunset in trying to arouse interest, create and develop air conditioning onto a high level.

Not only hard work and long hours, but many a dollar was lost to the unethical and foul practice of manufacturers and cut-throats. These pioneers paid the price of trying to educate and establish a market for air conditioning, not only in the commercial market but in the residential field as well. That seed which they planted and worked so hard for is now beginning to take root and grow.

Then when things in the air conditioning field begin to look up, what happens? You know. This is what's happening in this locality where housing projects are on the boom, and all year conditioning is flourishing. Some of our largest manufacturers of air conditioning equipment are approaching these housing project builders and selling them on the idea that the equipment they manufacture is so engineered and so produced that he, the builder, can install it with his own organization and crews, and in so doing, he, the manufacturer, quotes Mr. Project Builder direct; thereby completely ignoring the air conditioning contractor.

What do these air conditioning manufacturers expect in later years regarding service? Show me an air conditioning unit that starts off and performs satisfactory service even in the first 12 months, without some intelligent adjustments regardless of make or warranty. The manufacturer is not set up for the servicing of these adjustments and the project builder is through with the job. John Q. Public is the goat.

Will this method of placing air conditioners in the users hands pay? Will this lack of service to air conditioning equipment build up good will and prospects for future sales? I can't see it. Merchandise regardless of make renders no better service than the service it receives.

We are experiencing in this area now, by one of the largest manufacturers of window units, a retail cut of \$60.00 on one of their models, and the season hasn't started yet. Some of the factories and factory representatives have informed us that they propose to give price cuts to building managements direct, their prices going as low as the dealer's cost.

Last year it started to be a cat and dog fight, and from all indications this year will be even worse. We have had incidences here where jobbers sold window units indiscriminately. Anybody who had the cash in their pockets could purchase one or more units. These various companies who have sold these window units do not make installations or maintenance service, and the time will come when these thousands of units will have to be serviced, and they are going to look to the air conditioning contractor and the serviceman for help.

I have also experienced already where manufacturers are offering distributors' prices to dealers indiscriminately not only to air conditioning dealers, but to any dealer regardless of his classification, such as drug-stores, and gasoline filling stations, etc. Of course, this has been brought about by the many new makes of the cooling units, and these manufacturers are grasping for any outlet regardless of his experience or qualifications.

As you know, this location is one of the Hot-Spots for air conditioning, and as I see it over the years of experience that the contract dealer in this particular field is going to be the goat. I could go on at length with various comments, and numerous examples from first hand information which have developed in the air conditioning field, but I feel that you are aware of this situation.

I am only a small operator and depend upon this particular industry for livelihood, and I can't help but feel or try to express to you some of the views that have been brought to my attention. Our industry can be one of the biggest in this particular area, yet it will be a football kicked around to where firms such as myself will see no advantage of staying in the air conditioning business. I only hope and pray that before we

get into the season that men like you who are in a position to express views strong enough and forcibly to call a halt to some of the practices that manufacturers of air conditioning allow to exist and tolerate.

I want to again compliment you on your stand of frank expression, and hope that in your particular capacity you will continue to express and forcibly call attention to the industry the foul and unethical practice that they, the manufacturers, started.

I am a member of the Fort Worth Air Conditioning Association here in Fort Worth, and the conditions referred to in this letter have been discussed pro and con, and I feel that it will be only a short time when you will hear from members of the association as to their views.

I believe that if you would take a poll to find out the views of the different air conditioning association men in the larger areas, asking them for their views, and their reaction along these lines, that they will be forthcoming with the comments as mentioned above. I regret this lengthy letter, but I do sincerely hope as one in the field that you will carry on with your good work, and help to rectify one of the most chaotic conditions which in my mind is expanding into one of the most respected and appreciated industries. This industry could be one of the most profitable in our line of endeavor.

Let's not allow this industry to sink to a new low of unethical and no longer profitable business. Thanking you for your kind attention I remain,

B. P. RHINEFORT

FORT WORTH GROUP ASKS FOR EDITORIAL REPRINTS

 Fort Worth Air Conditioning Assn.
Fort Worth, Texas

Editor:

As secretary-treasurer of the Fort Worth Air Conditioning Association, and speaking for the entire group, I express our appreciation and satisfaction with the recent editorial in the AIR CONDITIONING & REFRIGERATION NEWS. The article is very timely and the editor is to be complimented on bringing the situation to the attention of the industry.

I have been requested by members of the Fort Worth Air Conditioning Association to send for 200 reprints of this editorial which appeared in the Feb. 23 edition.

M. B. MOBLEY

USED COOLING WATER SKIPS METER CHARGE?

 Arnold - Browne
Metal & Supply Co.
Birmingham, Ala.

Editor:

We have been advised that one of your December or January issues carried an article pertaining to the

City of Beaumont, Texas, permitting air conditioning water cooling lines to be installed directly into the main water system and then the used water to be emptied into the same water system, meaning that actually there is no meter charge for the water used for cooling in Beaumont, Texas.

Could you please send us a copy of the article in question. The writer has just subscribed to your paper and hopes that you will favor him with this courtesy.

R. E. CLARKSON, General Mgr.

WHAT ARE RULINGS ON SERVICE CONTRACTS?

 The Hawaiian Electric Supply Co.
Honolulu, Hawaii

Editor:

During the past year there have appeared in your very interesting and informative paper articles referring to court rulings on service contracts beyond the manufacturer's warranty period for equipment.

It is my recollection that several such instances were reported and in each case courts had ruled that service contracts beyond the manufacturer's warranty could not be entered into by service organizations because they would be classified as insurance operation and therefore subject to the insurance laws of the state.

We are faced with the similar problem in this Territory and so that our attorneys here may be able to contact people to get the necessary information, would you send me copies of those articles referred to above to be used as a basis of our attorney's inquiry?

R. C. COOPER, Service Manager

Answer:

A check of what we have published on the subject of service contracts beyond the manufacturer's warranties being subject to the insurance laws of the state doesn't reveal any great amount of legal ruling on the subject.

About the only thing along this line that has come to our attention in the past year is a ruling by State Insurance Commissioner Donald Knowlton that companies offering a service contract, guaranteeing replacement of parts, in the sales of home appliances, home freezers, television sets, and air conditioning units, "are in fact engaged in the sale of insurance without complying with the insurance licensing laws of the state."

However, there isn't too much evidence that such action is being taken in other states.

Just recently (in the February 2 issue) we published a story telling how the extension to five years of the manufacturer's warranty on certain hermetic and open compressors is being made by some parts wholesalers. In conjunction with this plan an insurance program has been developed on a limited and somewhat experimental basis. Such warranty insurance has been made available by Marsh & Mc Lennan, Inc., a national insurance brokerage firm.

Home Freezer Manufacturers

The May 25 issue of AIR CONDITIONING & REFRIGERATION NEWS is the annual Home Freezer Specifications Issue . . . containing detailed comparative specifications on all major makes and models of home freezers! Be in the picture!

Here's an opportunity to supplement your company's free specifications listing . . . to tell and show your own sales story . . . with a power-packed, impressive, dominant advertisement to sell all the advantages of your freezers! Thousands of extra copies sold and used by dealers and their salesmen.

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Crosley model CDF-E automatic dryer on far left can handle 18 lbs. of wet wash. Companion model LWF, Deluxomatic washer is at right. New 30-in. electric range model RF-PD30 features extra large oven.

Crosley Appliance Line for 1953--

(Concluded from Page 1, Column 4)
Load" cylinder, combined with "Power Jet-Flo," insures complete, yet gentle, washing of all fabrics, including new synthetic fibers, according to the company. Design of the cylinder is said to make "balancing" a laundry load unnecessary.

Other features of the Customatic include a "Water Miser," the water level guide, for controlling the amount of water used in relation to the laundry load.

The Deluxomatic (LWF) contains all of the features of the Customatic with exception of the automatic heat-keeper. An automatic water temperature control allows the homemaker to select the water heat she desires.

The Supermatic (DWF) features a fully-automatic agitator-action washer "at a low economy price." Eight pounds of dry clothes are gently, but thoroughly, washed, rinsed and damp-dried, in an automatic cycle in a "Resilloy Flex-A-Tub," which carries a five-year warranty, Crosley said.

HOMEMAKER CAN CHOOSE NUMBER OF RINSES

"A 'Rinselector' allows the homemaker to choose the number of rinses necessary for the particular load, thereby saving up to 14 gal. of water a load," the company stated.

"The vacuum action of the Flex-A-Tub permits double drainage of dirt prior to final rinsing. Floating dirt is drained off through the top of the plastic agitator; heavy dirt is flushed out through holes at the bottom of the agitator.

"A time-temperature dial controls the time cycles and the temperature of the wash water, permitting the homemaker to vary the length or sequence of cycles for special loads of laundry."

In the semi-automatic Rollamatic (SWF), Crosley offers an agitator-action washer that is full-sized but completely portable, and will handle 8 lbs. of dry clothes. Mounted on hard rubber casters, it can be stored anywhere when not in use.

A single dial controls all the washing operations of the Rollamatic, which are accomplished by Crosley's agitator-action in the Resilloy Flex-A-Tub. The machine rinses clothes by a double drainage action, both at the top and the bottom of the plastic agitator. Damp-drying is done by contraction of the Flex-A-Tub.

ELECTRIC AND GAS DRYERS

The electric dryer is designated CDF-E, and the gas dryers CDF-N and CDF-I (\$279.95) and CDF-NA and CDF-IA (\$299.95).

Capacity of the Crosley dryer is approximately 18 lbs. of wet clothes. "Operation is fully automatic," the company pointed out, "with the home-

maker merely setting the timer control according to load requirements. Clothes are gently tumble-dried in a sealed cylinder with lint escaping only to an easily removable lint catcher at table-top level.

"The 'Hi-Pressure' air vent assures fast, even drying and efficient exhaust of heat and moisture. A safety door, which stops the dryer when the door is opened, and special thermostats provide for safe operation. An interior light automatically illuminates interior when door is opened."

The electric model will operate on either 110 or 220 volts. Gas burner is designed for operation on either natural, mixed, or bottled or manufactured gas.

"Crosley now manufactures and sells 355 separate items of kitchen equipment, appliances, television, and radios," stated William A. Blees, Crosley vice president in charge of sales. "Each working day, Crosley dealers over the world sell in excess of 7,000 Crosley products. Crosley is one of only two companies which has such a full line of major appliances and electronic equipment."

LAUNDRY LINE HARMONIZES WITH OTHER APPLIANCES

F. F. Duggan, general sales manager, appliances, pointed out that the laundry equipment, built at the Avco plant in Clyde, Ohio, has been styled to harmonize with the rest of Crosley's line of major appliances.

The new upright Shelvador freezer (UEF-13), which features five fully-recessed shelves in the door, has a capacity of more than 13 cu. ft. and will hold up to 455 lbs. of frozen food. Its exterior styling matches Crosley's Shelvador refrigerator line, and the interior has the Crosley "Soft-Glo" color treatment.

A lift-out shelf gives "complete flexibility" in the storing of large bulky packages, and a pull-out storage basket, mounted on nylon bearings, makes food stored at the bottom of the freezer easily accessible, the company noted.

All shelves, except the lift-out shelf, are fast freeze shelves with open coil construction. An additional freezing surface is located at the top of the storage compartment.

Adjustable temperature control has two settings: 0° for protection of frozen foods and -10° for fast freezing.

A trigger-action door latch and floor levers are other features. The latter both compensate for uneven floors and furnish an adjustment for controlling the closing action of the door to any degree desired.

A five-year warranty on the entire freezing system comes with this freezer.

Both of the 30-in. ranges have ovens measuring 23 1/4 in. wide by

16 1/4 in. high by 19 in. deep.

This range takes up approximately one-third less space than a standard 40-in. range, yet its oven will cook complete meals for 15 people, including two pies for dessert, Crosley said.

The RF-PD30, at a suggested retail price of \$249.95, is completely automatic and contains all the features of Crosley's other deluxe models, including push-button control of the seven heats on the four surface units and the new Crosley-designed "Best-Bake" oven unit. Floor levers reportedly increase performance of the new oven.

ECONOMY MODEL RANGE

The RF-E30, at a suggested retail price of \$199.95, is the economy model 30-in. range, with all the basic features of the deluxe model, including the Best-Bake oven, except automatic timing, and with rotary switches in place of push buttons. A lamp and timer are available as accessories.

The deluxe model has a new back panel, designed to keep controls out of the heat and steam zones, a specially designed fluorescent light fixture to increase illumination on the range top and controls, and new and more convenient oven and storage drawer handles.

Other regular features of the Crosley line appearing on both 30-in. ranges are the construction of the self-sealing, self-adjusting oven door that "insures maximum oven performance with minimum heat loss," the divided range top, seven heats, removable reflector pans, and flush-to-wall installation.

The distributor meeting at Uline Arena in Washington was a two-day event with the new products being presented on Monday and an all-day business and training session on Tuesday.

It was one of four scheduled during the month. Other meetings were set for St. Louis on April 17 and 18, at Biloxi on April 20 and 21, and at San Francisco on April 27 and 28.

Credit Controls--

(Concluded from Page 1, Column 2)
plusive and useless piece of legislation."

Said Otter: "A large segment of American businessmen voted for President Eisenhower last November because of campaign promises to rid business of unnecessary controls. In three months the new administration has asked Congress for more powers than President Truman ever thought of. If installment credit controls are finally passed by Congress, President Eisenhower's administration will be convicted of a broken promise."

"To add insult to damage, the Senate committee voted to give these powers to the Federal Reserve Board and not to the President. Governor Martin, of the Federal Reserve Board, testified that he wants permanent control over installment credit, generally known as Regulation W, which is a trade regulation, pure and simple, and has nothing to do with inflation."

"The Committee's bill, therefore, gives these outlandish powers to a banking organization, and not to the President. The board is not industrially minded. Apparently, the board wants to cut employment at a time when there is full production. The Federal Reserve Board's request for these powers is most dangerous to the general welfare."

He charged that "millions of workers and industries will be subject to the Federal Reserve Board's whims, if this bill passes."

"Manufacturers, retailers, and lending institutions are responsible for hundreds of millions of dollars of other people's money. Certainly, no manufacturer would dare to invest these millions in plant expansion and greater employment so long as the very threat of this regulation hangs over his head. If peace comes, Regulation W, even on a stand-by-control basis, would result inevitably in a depression."

"The Senate committee has been apparently deluded in to believing that installment credit debt is so high now that it must be controlled. This delusion is further evidence of the Federal Reserve Board's shenanigans."

"The board told the committee that this type of debt totals 17 billion dollars. This is a deliberately bloated figure. The seventeen billion dollars includes installment debt for furniture bought by hotels and rooming houses, automobiles bought by doctors, traveling salesmen, and factory workers who could not get to work without a car, and TV sets for restaurants. In all honesty, such purchases must be considered commercial debt."

Refrigerator Sales by NEMA Firms Total 377,605 Units In February

Summary for February and First Two Months, 1953
Complete Refrigerators Only—Sales by Sizes—Units

FEBRUARY (17 Companies)

Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. Less than 4 cu. ft.
2. 4 cu. ft.	1,646	1	142	1,789
3. 5 cu. ft.	79	9	38	126
4. 6 cu. ft.	16,268	2	2,633	18,903
5. 7 cu. ft.	55,018	3,148	3,739	61,905
6. 8 cu. ft.	41,826	186	2,275	44,287
7. 9 cu. ft.	84,941	3,440	3,395	91,776
8. 10 cu. ft.	71,473	2,276	1,813	75,562
9. 11 cu. ft.	62,100	810	1,281	64,191
10. 12, 13 cu. ft. and up	18,345	248	473	19,066
11. Total	351,696	10,120	15,789	377,605
Refrigerators having two exterior doors (all sizes) (Included in above)	36,991	39	442	37,472

FIRST TWO MONTHS (17 Companies)

Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. Less than 4 cu. ft.
2. 4 cu. ft.	3,315	2	177	3,494
3. 5 cu. ft.	83	9	41	133
4. 6 cu. ft.	33,637	2	4,777	38,416
5. 7 cu. ft.	91,450	5,140	5,570	102,160
6. 8 cu. ft.	100,415	2,186	4,821	107,422
7. 9 cu. ft.	158,759	4,148	5,715	168,622
8. 10 cu. ft.	144,072	5,231	3,660	152,963
9. 11 cu. ft.	109,189	2,157	2,819	114,165
10. 12, 13 cu. ft. and up	35,962	291	1,024	37,277
11. Total	676,882	19,166	28,604	724,652
Refrigerators having two exterior doors (all sizes) (Included in above)	70,169	39	904	71,112

Participating companies: Admiral Corp.; Bendix Home Appliance Div., Avco Mfg. Corp. (In 1-1-53); The Coolerator Co.; Crosley Div., Avco Mfg. Corp.; Deepfreeze Appliance Div., Motor Products Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint Co., Div. General Electric Co.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; A. J. Lindemann & Hoverson Co.; Norge Div., Borg-Warner Corp.; Philco Corp., Major Appliance Div.; Quicfreez, Inc., (formerly Sanitary Refrigerator Co.); Seeger Refrigerator Co.; Westinghouse Electric Co.

Refrigerator Sales For February Up 35%--

(Concluded from Page 1, Column 3)
months last year. Canadian sales were 216% better and other foreign sales 5% higher.

February sales were a bit better than January. Total sales were 8% higher, Canadian sales 11% better, and other foreign sales 23% better.

Approximately 25% of the units sold in February were in the 9-cu. ft. category. The 10 and 11-cu. ft. sizes were the next most popular and the 7-cu. ft. size was not far behind. These three categories accounted for about 50% of the total sales.

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Proven Uses Include
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COOLING TOWERS
ENGINES & COMPRESSORS
CUBE & FLAKE ICE MAKERS
BOILERS (to 175 # wp)
and many others

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SIZES
SCREWED 1/2" through 2"
FLANGED 2" through 12"

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PAT. APPLIED FOR

Evil Water Conditioners are accomplishing astonishing results in conquering scale. Better yet, this method of control eliminates equipment shut-downs for periodic clean-up.

The Evil Conditioner is a simple pipeline fitting made of Specially Processed Cast Metal which imparts a continuous catalytic action on water-loads flowing through it. The change effected on physical behavior inhibits most scale formations. In fact, EVIS-ized Water has been known to "carry" hardness as high as 600 gpg before depositing scale.

Evil operation starts immediately on installation—frequently complete clean-up is accomplished in less than 60 days. Surfaces then remain free of scale indefinitely.

For further information about Evil Water Conditioners and for dealer franchise arrangements write your nearest Evil Regional Distributor.

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KEN-EVIS COMPANY
11146 E. Whittier, ON 9-2211
SAN BERNARDINO (Calif.)
KNOX & WRIGHT
276 E. Main St., SB 8-7818
SAN FRANCISCO
NORTH-EVIS AGENCY
41 Doan Ave., ME 7-1822
RENO
WATER CONDITIONED SALES CORP.
Western Ames Bldg., 2-3639
SEATTLE
EVIS-NORTHWEST CORP.
2437 E. Marginal Way, PU 6-1116
CHICAGO
EVIS-GREAT LAKES COMPANY
203 N. Wabash Ave., ST 2-5948
OMAHA
EVIS-MIDWEST, INC.
1104 Dodge St., J 4-7944
DALLAS
EVIS-SOUTHWEST CO.
6057 E. Harry Chase, E 6-0137
ATLANTA
EVIS-SOUTHEAST CO.
315 Spring St., N. W., VE 9-2441
PHILADELPHIA
EVIS-MIDWEST CO.
417 Richmond St., NJ 4-7941
ALBANY (New York)
EVIS-NORTHEAST CO.
10 Rappin Dr., LN 9-7921
EXCLUSIVE MARINE DIST.
MORAN-EVIS CO., SAN FRANCISCO
620 Market St., EM 3-4100

another

RECORD

first

Do The Refrigeration Coils You Use Have Motor Overload Protectors?

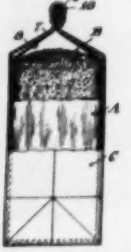
All "RECORD" Coils Have This Added Protection

Refrigeration Engineering, Inc.
7250 East Slouison • Los Angeles, Calif.

PATENTS

Week of December 2
(Continued)

2,619,801. REFRIGERATING PACKAGE. Wil Evans, Oakland, Calif., assignor, by means assignment, to Mrs. Ruby Alice Hodsell. Application Jan. 31, 1950, Serial No. 141,565. 6 Claims. (Cl. 62-1.)



1. A package for forming a refrigerating element comprising a bag having an open end portion, a liquid impervious tube enveloped by said bag having a closed end and an open end, said tube being disposed with its open end within the open end portion of said bag and spaced inwardly from the open end of the bag, a body of dry liquid absorptive fibrous material in said tube spaced inwardly from the open end of said tube; the open ends of said bag and tube being collectively foldable to temporarily close same in spaced relation to said material, and clamping means

HE CASHES IN



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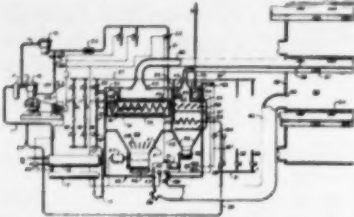
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4-20-53

for releasably holding said folded ends in their closed position.

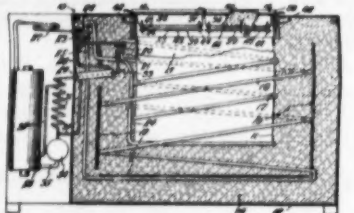
2,619,802. AIR CONDITIONING SYSTEM. William O. Kline, Waynesboro, Pa., assignor to Frick Co., Waynesboro, Pa., a corporation of Pennsylvania.



8. In an air conditioning system including compressing, condensing and evaporating means and connection therebetween including a suction line from the evaporator to the compressing means, a heat exchange chamber in which the evaporating means is positioned, and a multi-speed blower for producing air flow through the heat exchange chamber, a control system comprising a modulating valve in the suction line, and means responsive to the temperature and humidity of the air entering the heat exchange chamber and adapted to control the operation of the modulating valve, and multi-speed blower, whereby the modulating valve is gradually closed as the temperature of the air decreases in order to increase the temperature of the evaporating means, and the speed of the blower decreases as the demand for cooling and humidifying is decreased.

10. The structure recited in claim 8, the air conditioning unit including a humidifier in parallel with the heat exchange chamber and provided with a blower, means for circulating water within the humidifier in contact with air passing therethrough, and means for heating the water including a connection from the compressing means to the humidifier, the humidifier being provided with independently operated control means responsive to the humidity of the air and adapted to operate the humidifier blower and water circulator upon a demand for humidification, a valve in the connection between the compressing means and the humidifier, and means responsive to a temperature differential between the air entering and leaving the humidifier, said means controlling the operation of the valve, whereby upon a demand for humidification air is circulated through the humidifier and in contact with the water, the differential temperature responsive means maintaining the heat of the water such that the temperature of the air entering and leaving the humidifier remains substantially constant in order that the humidifier may add moisture to the air in the system as required but have substantially no effect on its temperature.

2,619,804. REFRIGERATOR HAVING PROVISIONS FOR REDUCING HEAT TRANSFER THEREIN. Nils Erik Widell, Stockholm, Sweden, assignor to Aktiebolaget Elektrolux, Stockholm, Sweden, a corporation of Sweden.

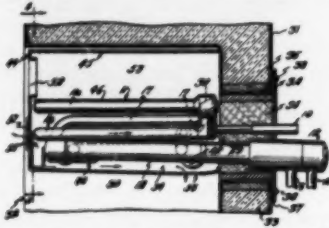


1. In the art of preserving food and the like in a space which is formed with a top access opening and thermally insulated from the surroundings when the access opening is closed, the method which comprises abstracting heat from said space to effect cooling therein, transferring heat from the surroundings into said space due to radiation from a bounding wall surface which is at the access opening and defines the upper extremity of said space when the access opening is closed, reducing such heat transfer by re-radiating heat back to said bounding wall surface through a zone of said space from a region thereof which is beneath the closely adjacent to and spaced from said bounding wall surface, and, as the result of cooling effected in said space, inducing natural circulation of air therein including said zone in the extreme upper end thereof, the air in said zone tending to be relatively stagnant and resisting natural circulation of air induced in said space.

2,619,805. COOLING UNIT FOR REFRIGERATION APPARATUS. Wilhelm Georg Kogel, Stockholm, Sweden, assignor to Aktiebolaget Elektrolux, Stockholm, Sweden, a corporation of Sweden.

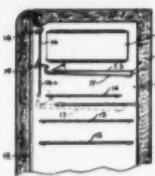
1. A cooling element comprising a first

coil adapted to be operated at a low average or mean temperature and a second coil below said first coil adapted to be operated at a higher average or mean



temperature, a horizontally disposed member in good heat conducting relation with said first coil for supporting ice trays or the like, housing structure including vertically extending wall members, means for mounting said housing structure on said first coil in poor heat conducting relation therewith and in spaced relation with respect to said second coil, said structure when mounted on said first coil providing a housing having openings for circulation of air therethrough, such air flowing through the housing being directed to pass in thermal exchange relation with said second coil.

2,619,806. COMBINED DRIP BAFFLE AND HANDLE FOR REFRIGERATOR CLOSURES. Othel I. De Graw, Greenville, Mich., assignor to Gibson Refrigerator Co.



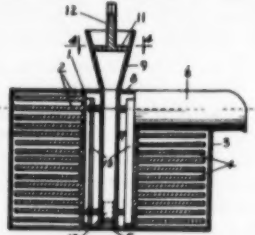
1. A refrigerator comprising a cabinet having a food storage chamber therein provided with a main closure, an evaporator in the chamber for cooling the latter, a first auxiliary closure for said evaporator located at the front thereof and extending in a vertical plane, a second auxiliary closure located below and substantially in the same plane as the first named closure, means below the evaporator in rear of the second auxiliary closure for collecting moisture, and a drip deflector on said second closure at a level above said means and extending rearwardly from said second closure, the rear edge of said drip deflector being located above said means, said drive deflector being provided with means forming a handle for said second closure.

2,619,807. ICE TRAY CUBE LIFTER. Peter Esba, Austin, Texas, assignor of one-half to Gustave Miller, Washington, D. C.



1. In combination with an ice cube tray and ice cube releasing grid having a lower center dividing bar and an upper sliding dividing bar extending through transversely extending grid plates and a release handle pivoted to both center dividing bars for releasing all of the ice cubes by moving said center dividing bars relative to each other and simultaneously changing the angle of the transversely extending grid plates, an ice cube lifting mechanism for less than all the ice cubes comprising an extension plate integrally secured to the bottom edges of less than all of said transverse grid plates, said extension plate extending horizontally when the transverse grid plate is in its normal ice freezing position with the release handle in down position, and an ice cube lifting plate extending through a vertical slot in one less than all the transverse grid plates having the integral extension plate and guided by the vertical slot for vertical movement when the end of each said integral extension plate is raised vertically by the angular movement of the transverse grid plate to which it is attached as it is operated by the center dividing bars and operating handle, said lifting plate comprising at least a pair of enlarged plate portions connected by a reduced connecting neck extending through said vertical guide slot in the transverse grid, and an integral extension plate similarly mounted on the transverse grid of the adjacent compartment, thereby providing at least two lifting points at the ends of the integral extension plates beneath the ice cube lifting plate.

2,619,808. ICE CREAM FREEZER. William F. Baird, Los Angeles, Calif.

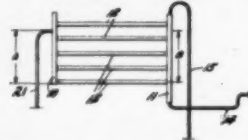


5. In apparatus for utilizing the refrigerating effect of a household refrigerator for freezing ice cream and the like in combination a vessel, a rotatable scraper assembly extending into said vessel, a conduit adapted for the introduction of mix extending from an outer portion of said scraper assembly to an inner portion of said vessel, an outlet adapted for the discharge of partially frozen mix from said vessel, a liquid-tight casing partially surrounding said vessel, a refrigerator having a freezing compartment adapted to receive and refrigerate said vessel and casing and a liquid partially freezeable in said freezing compartment permanently sealed in said casing.

2,619,809. CONDENSER STRUCTURE FOR ABSORPTION REFRIGERATION APPARATUS. Sigurd Mattias Backstrom, Stockholm, Sweden, assignor, by means assignment, to Aktiebolaget Elektrolux, Stockholm, Sweden.

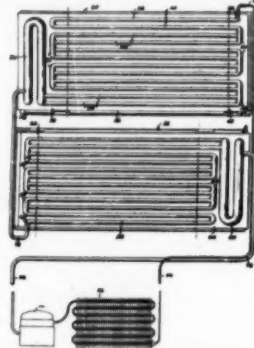
1. In air-cooled absorption refrigeration apparatus containing an inert gas and refrigerant fluid which in vapor phase is denser than the gas, a gas circuit including evaporator structure, and a vapor expulsion unit for producing re-

frigerant vapor, means for supplying liquid refrigerant to the evaporator structure comprising condenser structure including first and second vertically disposed conduits in spaced apart relation, a plurality of horizontally extending pipes arranged at least at three different levels, each of said pipes having one end thereof connected to said first conduit and the opposite end thereof connected to said second conduit, the cross-sectional areas of said conduits being greater than the cross-sectional areas of said pipes and forming vertical end headers, said first conduit constituting means for establishing fluid communication between all



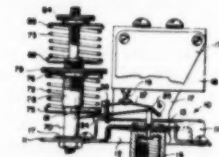
of said pipes which are embodied in said condenser structure and connected thereto, said second conduit constituting means for establishing fluid communication between all of said pipes which are embodied in said condenser structure and connected thereto, conduit means for conducting refrigerant vapor from the vapor expulsion unit to an end header of said condenser structure at a level which is above the connection thereto of the lowest pipe and below the connection thereto of the highest pipe, conduit means communicating with an end header of said condenser structure for conducting liquid refrigerant therefrom to the evaporator structure, and conduit means communicating with an upper part of said condenser structure for venting inert gas therefrom to the gas circuit.

2,619,811. REFRIGERANT EVAPORATOR. Lawrence A. Philipp, Detroit, Mich., assignor to Nash-Kelvinator Corp.



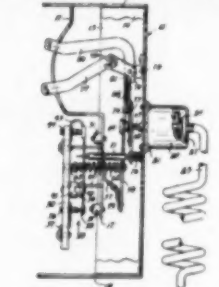
1. A refrigerant evaporator comprising, a container having top, bottom and end walls, a plurality of spaced parallel runs of a refrigerant passage on said top wall, said runs extending part-way down said end walls and having connecting loops thereon, an inlet and an outlet for said refrigerant passage, a plurality of spaced parallel runs of a refrigerant passage on said bottom wall, the runs of said second passage extending part-way up said end walls having loop portions thereon in vertical spaced relationship to said first loop portions, an inlet and an outlet for said second refrigerant passage, a refrigerant manifold on said one end wall between said loop portions having an inlet connected to the outlet of said first passage, an outlet for said manifold connected to the inlet of said second refrigerant passage, and a refrigerant accumulator on the other of said end walls between the loop portions thereon and connected to the outlet of said second refrigerant passage.

2,620,413. CONTROL DEVICE. Bert L. Johnson, Chaska, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware. Application July 6, 1948, Serial No. 37,273. 2 Claims. (Cl. 200-83.)



1. In a control device, a frame, a member movable in said frame, a condition responsive element operatively connected to said member and biasing said member in one direction with a force depending on condition value, a switch carried by said frame and operated by said member, said switch being operative to make or break a circuit on movement of said member through a predetermined range, a post secured to said frame, a sleeve slidable on said post, a stop for limiting movement of said sleeve, a first spring having one portion secured to said sleeve and another portion acting on said member, said sleeve also serving as a stop to limit relative movement of the two portions of said first spring, a second spring secured at one portion to said post and having another portion engaging said sleeve and biasing said sleeve against said stop.

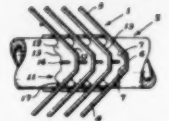
2,620,414. TEMPERATURE RESPONSIVE CONTROL DEVICE. Joseph O. Thorheim, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware. Application April 24, 1948, Serial No. 23,027. 13 Claims. (Cl. 200-140.)



1. In a control device, a condition responsive element, a main lever positioned by said element, a first auxiliary lever pivoted to said main lever, an adjustable abutment for engaging a portion of said first auxiliary lever, a switch having a one way connection with and adapted to

be actuated by another portion of said first auxiliary lever at a condition value depending on the setting of said adjustable abutment, a second auxiliary lever pivoted to said main lever, an adjustable abutment for engaging a portion of said second auxiliary lever, and a switch having a one way connection with and adapted to be actuated by another portion of said second auxiliary lever at a condition value depending on the setting of the adjustable abutment for said second auxiliary lever.

2,620,171. HEAT EXCHANGE FIN AND ASSEMBLY. Melvin Dubin and Max Goldstein, Brooklyn, N. Y., assignors to Slant-Fin Radiator Corporation, Brooklyn, N. Y.



1. A heat exchange fin formed of relatively rigid material comprising a pair of fin elements extending away from each other at an included angle of substantially less than 180°, means for joining said fin elements together at their adjacent ends, said joining means and said fin elements adjacent thereto being formed with a perforation therethrough for reception of a pipe, and a flange formed from the material of said fin bordering said perforation and extending within said angle for engagement with said pipe, said flange being formed with interruptions therein about the apex of said included angle.

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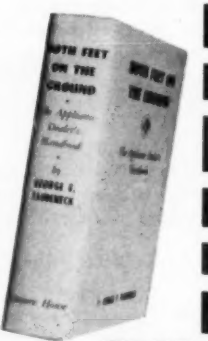
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4-20-53

Government Contracts

PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing officer under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date. This will save time in filling your request. For reasons of economy, specifications are normally not included with the bid invitations unless the specification is a new one. First time bidders on a particular item should request a copy of applicable specifications and drawings at the time the request for a bid is made.

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following U. S. Army Ordnance Offices: Ordnance Tank Automotive Center; Detroit Arsenal; Frankford Arsenal; Picatinny Arsenal; Raritan Arsenal; Ordnance Ammunition Center, Joliet, Ill.; Rock Island Arsenal; Springfield Armory; Watervliet Arsenal; and Watervliet Arsenal. Complete information on any purchase listed by any of those offices alone can be obtained from the Ordnance District Office nearest you. Its address is on file in your nearest Department of Commerce Field Office. Do not ask an Ordnance District Office for information on a purchase unless it is listed by one of the above-named offices. Ordnance District Offices do not have information on any other purchases.

Invitations for Bids numbers will be followed by the letter "B." Requests for proposals or quotations will be indicated in this column by the letter "Q" or, if numbered, the number will be followed by the letter "Q."

GENERAL SERVICES ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
Business Service Center, General Services Administration, Region 5, 219 S. Clark St., Chicago, Illinois			
Dearborn, Mich. U.S.P.O.	Job	C & R 746	20 Apr 53
plumbing and heating repairs.			

DEPARTMENT OF DEFENSE

Description	Quantity	Invitation No.	Opening Date
Purchasing and Contracting Ofc., Fort Hood, Texas		(E-41-093-53-17)	27 Apr 53
Installation of heating facilities, Fort Hood Airfield at Fort Hood, Texas.			
Officer in Charge of Construction, U. S. Naval Station, New Orleans, Louisiana			
Additional Air Conditioning in Building 157, Naval Station, New Orleans, La.	Job	37223	28 Apr 53
Mobile District, Corps of Engineers, P.O. Box 1169, Mobile 7, Alabama			
Furnish and install heating and air conditioning equipment for crushing and grinding facilities at Redstone Arsenal, Huntsville, Ala. Plans and specs. available 8 Apr 53. Deposit on plans \$10.	Job	(ENG-01-076-53-67B)	5 May 53
Philadelphia District, Corps of Engineers, 1420 Walnut St., Philadelphia, Pennsylvania			
Ice making machine, cube-portable, 4100 cubes.	50 ea.	(ENG-36-109-53-675B)	15 Apr 53
Air conditioning unit for truck, 2 hp.	20 ea.	(ENG-36-109-53-687B)	17 Apr 53
Air conditioning unit, floor type, 79,000 B.t.u.	22 ea.	(ENG-36-109-53-688B)	18 Apr 53
Commanding General, Ordnance Tank Automotive Center, Detroit, Michigan			
Semitrailer van refriger. 12 ton 2 W 28 ft.	4	53-1506-B	7 May 53
Director of Procurement, Warner Robins Air Materiel Area, Robins Air Force Base, Georgia			
Invitation for Bid /B/ and Requests for Proposal /Q/ are distributed to firms listed on Air Force Bidders list. Specifications and drawings are available at nearest AF regional Office for EXAMINATION ONLY by prospective bidders pending their inclusion on AF Bidders List. Bidders can apply for placement on AF Bidders List upon application at nearest AF Regional Office.			
Blower, Exhaust, Cap. 4050 CFM, outlet velocity 2600 feet per minute.	78 ea.	(160B-22 Apr 53 Prime Class)	
Fan, electric, exhaust approx. 6500 CFM Propeller type, in a/w Spec. WRMEI 53-F, 97.	150 ea.	(160B-22 Apr 53 Prime Class)	
Bureau of Ships, Washington, D. C.			
Sink, temperature-controlled, with refrigerated storage cabinet, for photolithographic processing, capable of operation on 115 volt a.c. power spec. MIL-S-17048 (Ships) dated 7 March 1952.	4	522-105Q	11 May 53

NOTICE OF SALE

Supplies and Services Branch, Civil Aeronautics Administration, Aeronautical Center, P.O. Box 1082, Oklahoma City, Oklahoma

Fan-ventilating, U.S.A.W.5 17 ea. (15-53S/- 136) 27 Apr 53

standard size A16A4W5, equipped with 15/4.5 440-volt, direct current, General Electric motor, as manufactured by the Buffalo Forge Co., Buffalo, N. Y. Condition—This equipment is reported as being used-usable without repairs—fair condition.

18 Marlo Units Cool Annex To Michigan Bell Building

DETROIT—Eighteen Marlo "Multi-Zone" air conditioners have been installed in the new annex to the Michigan Bell Telephone Co. building here to protect delicate equipment as well as provide comfort for employees, the Marlo Coil Co. announced recently.

Architects and engineers for the Michigan Bell Annex were Smith, Hinchman & Grylls, Inc. Bryant & Detwiler Co. was general contractor, and Harrigan & Reid was mechanical contractor.

Detroit Distributor Plans Dealer Show April 21-22

DETROIT—Two-day showing of product and promotion plans has been scheduled by Temperature Control, Inc., local distributor of Carrier and other lines, for April 21 and 22 at the Lee Plaza hotel here.

First announcement of the showing was sent out to dealers in the form of an oversize simulated telegram which described the two days as "air conditioning days in Detroit."

Special clinics are planned for each evening to which dealers are invited to bring their salesmen.

Deepfreeze Appoints Price Distributor In Kentucky Area

NORTH CHICAGO, Ill.—Price Distributing Co., Louisville, Ky., has been appointed to distribute Deepfreeze appliances in Kentucky, southern Illinois, and southern Indiana, covering a total of 94 counties, it is announced by B. G. Sanderson, general sales manager of Deepfreeze Appliance Div. of Motor Products Corp.

James A. Price, president of Price Distributing Co., said this will be the first time his firm has handled home freezers. In addition to Deepfreeze home freezers, Price said the firm will distribute Deepfreeze refrigerators, electric ranges, and electric water heaters.

National Sales Manager Needed For Newly Created Position

We sell fans, air conditioners, and dehumidifiers nationally through electrical distributors.

If you are qualified to head a 25 man operation and know the trade write in confidence to R. F. Gang, Viking Air Conditioning Corporation, 5601 Walworth Ave., Cleveland 2, Ohio.

General Controls Sets Up New Office in Syracuse

GLENDALE, Calif. — Leonard Schnall has been appointed by General Controls Co. to head a new field sales and service office in Syracuse, N. Y., according to J. F. Ray, vice president in charge of sales for the automatic controls manufacturing firm.



Leonard Schnall

Schnall is a graduate of Cornell university and was formerly on the sales staffs of International Harvester Co. and Lever Bros.

The new Syracuse office will report to the Buffalo branch office of General Controls, but will handle all sales and service matters on household and industrial controls in a large area around Syracuse.

Flexrock Catalog Lists Mechanical Packings

PHILADELPHIA—A catalog of Flexrock mechanical packings has been published recently by the Flexrock Co. Packing Div. which is located here.

The 32-page book contains descriptive data and specifications on various types of packings, gaskets, gasket tape, plastic gasket compound, and pipe thread compound. It also features a packing recommendation chart.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$5.00 per insertion. Limit 50 words. 10¢ per word over 50.

RATES for all other classifications \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words. Other addresses by actual word count. Please send payment with order.

POSITIONS WANTED

YOUNG, EXPERIENCED sales engineer. Background in air-conditioning, refrigeration and ice machine sales. Desiring position with distributor or manufacturer. Will relocate. Auto. BOX 4286, Air Conditioning & Refrigeration News.

SALES REPRESENTATIVE. Fifteen years' background in appliance sales and management, retail and wholesale. Most recent experience—3 years as a division manager for a leading nationally known major appliance manufacturer. Can furnish recommendations from previous employers. Prefer location in Great Lakes area. BOX 4288, Air Conditioning & Refrigeration News.

MANUFACTURERS' REPRESENTATIVE, northern New Jersey, seeks additional lines. 20 years' experience, refrigeration and air conditioning ammonia and Freon. BOX 4289, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

REFRIGERATION MANUAL writer—Progressive Chicago appliance manufacturer has opening for a technical writer to prepare service and operating manuals for household electric refrigerators, room air conditioners, freezers, and other major appliances. Experienced writer preferred, but will give full consideration to person with sound knowledge of refrigeration service practices and the ability to express ideas clearly and concisely on paper. Permanent position. Submit resume of experience and salary requirements. ADMIRAL CORPORATION, 3800 W. Cortland St., Chicago, Illinois.

PARTNER in old established store fixture, refrigeration, & air conditioning business. No investment required but you must have experience in selling above equipment. Others will not be considered. You can make real money with this proposition. Write PITTSBURGH REFRIGERATION COMPANY, 2901 Penn Ave., Pittsburgh 1, Pa.

EXPERIENCED AIR CONDITIONING salesman by fast growing Airtemp distributor. Prefer man who can sell with minimum supervision and who is interested in a permanent position as one of our key personnel. Liberal draw, profit sharing, and numerous other benefits available to the right man. Contact AARON TORCH & SONS, 452 First Street, Macon, Georgia.

FIELD SERVICE engineer for Indiana, Ohio, Michigan. Age 32 to 42, living in northern Indiana or southern Michigan, with 10 or more years' experience, preferably food store refrigeration. No installation or service responsibility. We are looking for a capable man who wants to lay down his tool box for a better opportunity. One of the largest manufacturers of food store equipment has an excellent opportunity for a man free to travel in a definite territory without family interference. Salary, expenses, insurance, etc. Also a man for the eastern and New England states living in a mid-eastern state. Apply by letter, giving full particulars, with recent photograph. BOX 4283, Air Conditioning & Refrigeration News.

Servel Appoints DeMuth Plant Engineering Head

EVANSVILLE, Ind.—Woodrow W. DeMuth has been named superintendent of plant engineering at Servel, Inc., it was announced recently by Jack A. Scarlett, manager of manufacturing engineering.

For the past eight years DeMuth has been in charge of plant layout at the No. 2 Dayton plant of Frigidaire Div. of General Motors Corp.

During World War II he served for four years as a major in the U. S. Army Ordnance Dept. Before the war he was engaged in product engineering, process design and development for several large companies.

DeMuth received a degree in mechanical engineering from the University of Cincinnati.

Ashley Named To Head G-E Appliance Laboratory

LOUISVILLE, Ky.—The appointment of Samuel E. Q. Ashley as manager of the General Electric Major Appliance Div. laboratory at Louisville has been announced by J. L. Knight, manager of engineering.

Ashley will be in charge of the new laboratory to be built at "Appliance Park" and will direct applied materials and process research in the fields of chemistry, metallurgy, electricity, and mechanics.

In November, 1934, he joined General Electric at Pittsfield, Mass., and for the past 17 years has been chemical supervisor in the Transformer and Allied Products Laboratory there.

GENERAL SALES manager. Rapidly expanding major appliance concern looking for a highly qualified and experienced man. Salary open. Must be able to handle national sales organization. Write outlining experience. All correspondence will be confidential. BOX 4285, Air Conditioning & Refrigeration News.

SUPERINTENDENT OVER manufacturing operations consisting of sheet metal fabrication, finishing, compressor machining and assembly of air conditioning units. Plant located in metropolitan New Jersey area, with well established company. Mail complete resume stating salary requirements to BOX 4287, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

WE ARE in the market for 1500 old 145 lb. Freon Cylinders with valve & cap intact. Convert useless inventory to cash. Write EVERGREEN INDUSTRIES, 630 Colonial Ave., Pelham Manor, N. Y.

EQUIPMENT FOR SALE

FOR SALE—York condenser—max. W.P. 225 lbs., max. temp. 400G, test pressure 340 lbs. air, refrigerant Freon 12. For 25 ton unit. Has never been used as condenser. Will accept reasonable offer. BARCLAY REALTY CO., 1445 Beach Drive So., St. Petersburg, Fla.

BRAND NEW—140 1/2 H.P. Tecumseh model 83414L-110V-60 cycle condensing units: 20 1/2 H.P. Tecumseh model HA75LT-110V-60 cycle condensing units. All at special low prices. C & M MANUFACTURING CO., 712 South 23rd Avenue, Phoenix, Arizona.

NEW UPRIGHT freezer—21 cubic feet; over 700 lb. capacity; Modern design; gleaming white exterior; extra-quick freezing with freezer plate shelves. Complete with 1/2 h.p. Chieftain sealed unit self-contained; Ranco Temperature Control; F-22 Gas. Dealer Price \$359.00. Special discount for quantity. GENERAL REFRIGERATORS CORP., 2011 First Ave., N.Y.C. ENright 9-0200.

3 20-HP FRIGIDAIRE condensing units complete with condensers, motors, starters, cast iron bases and miscellaneous copper pipe and fittings. 2 LE 20 HP Schnacke condensing units complete with motors, starters and condensers for remote installation. 1 36 x 66 4 row Bush air conditioning coil. W. T. HEANEY CO., INC., 8425 Joy Rd., Detroit 4, Mich.

SPECIAL OFFERING 1/2-HP domes (motor compressor assemblies) Model S64 @ \$33. Also following complete units: 1/2-HP sealed @ \$45, 3/4-HP sealed @ \$55, 1-HP sealed @ \$70. Other sizes up to 5-HP. Write for specifications. Limited quantity. Act now. MANN REFRIGERATION SUPPLY CO., 440 Lafayette St., NYC, GRamercy 3-8000.

MISCELLANEOUS

NORGE SEALED units remanufactured or exchanged. Immediate delivery from stock, 2 year warranty. Freon refrigerant. Write for prices and shipping instructions. Genuine Norge terminals for Norge sealed units. Sets of three, \$1.15 plus postage. MODERN REFRIGERATION CO., INC., 12441 E. McNichols Road, Detroit 5, Mich.

PRODUCTION MANAGER WANTED

We offer an excellent opportunity for a man with a successful record in refrigeration manufacturing and a knowledge of time study, methods, and material control.

If you are interested and feel that you can qualify, send resume of your employment history, experience and education to Director of Personnel. Salary open. All replies to this advertisement will be treated as confidential.

REVCO, INCORPORATED DEERFIELD, MICHIGAN

Additional Mfrs. of Self-Contained Air Conditioners

(Listings of 1953 models of room air conditioners, complete home comfort cooling systems ["residential" systems], and commercial or "store" type package air conditioners were published in the April 13 issue of the NEWS. The following listings arrived too late for inclusion in the April 13 issue, and are published to round out the picture on the 1953 models.)

Room Air Conditioner Models

Lombard

Lombard Mfg., 25 Oak Hill, Youngstown, Ohio.

Model No.	Size (In Hp.)	Cycle and Voltage	Dimensions (In.)—Width Depth Height	Proj. In Room	Pump Out (Yes or No)	Suggested List Price
L-75-A	2	60-115	27½ 33½ 15½	11½	Yes	\$389.95*

*Thermostat included in list price.

Self-Contained Home Cooling Systems

Barkow

Aug. G. Barkow Mfg. Co., Inc., 2230 S. 43rd St., Milwaukee, Wis.

Model No.	Comp. Size (In Hp.)	Dimensions (In.)—Width Depth Height	Own Blower (Yes or No)	Blower Rating (C.F.M.)	Temp. Control (Yes or No)	Damper Control (Yes or No)
FU-2	2	36 21 36	No	800	No	No
FU-3	3	36 21 36	No	1,200	No	No

U. S. Summer Air Conditioner

United States Radiator Corp., 300 Buhl Bldg., Detroit 26, Mich.

Model No.	Comp. Size (In Hp.)	Dimensions (In.)—Width Depth Height	Own Blower (Yes or No)	Blower Rating (C.F.M.)	Temp. Control (Yes or No)	Damper Control (Yes or No)
USC-2	2	37 22 47½	Optional	800	Yes	Partially
USC-3	3	37 22 47½	Optional	1,200	Yes	Partially
USC-5	5	(Data Available May, 1953)	Optional	2,000	Yes	Partially
USC-7½	7½	(Data Available May, 1953)	Optional	3,000	Yes	Partially
USD-2	2	32½ 44½ 23½	No	800	Yes	No
USD-3	3	32½ 44½ 23½	No	1,200	Yes	No
USD-5	5	40½ 55½ 23½	No	2,000	Yes	No

USC is a vertical model for warm air furnaces. USD is a horizontal model for warm air furnaces.

Brunner & Comfotaire

American Coils Co., 360 Thomas St., Newark 5, N. J.

Model No.	Comp. Size (In Hp.)	Dimensions (In.)—Width Depth Height	Own Blower (Yes or No)	Blower Rating (C.F.M.)	Temp. Control (Yes or No)	Damper Control (Yes or No)
BAC 20-1	2	35½ 25½ 47½	No	800	Yes	No
BAC 30-1	3	35½ 25½ 71	No	1,200	Yes	No
BAC 50-1	5	44½ 26½ 76½	No	2,000	Yes	No
BAC 75-1	7½	51½ 30½ 83½	No	3,000	Yes	No
BAC 100-1	10	57 30½ 87½	No	4,000	Yes	No
Heatpumps:						
BAC 20-1-H	2	35½ 25½ 70½	No	875	Yes	No
BAC 30-1-H	3	35½ 25½ 70½	No	1,300	Yes	No
BAC 50-1-H	5	44½ 26½ 77½	No	2,000	Yes	No
BAC 75-1-H	7½	56½ 30½ 89½	No	3,000	Yes	No
BAC 100-1-H	10	56½ 30½ 89½	No	4,100	Yes	No

Commercial Type Package Air Conditioners

Barkow

Aug. G. Barkow Mfg. Co., Inc., 2230 S. 43rd St., Milwaukee, Wis.

Model No.	Comp. Size (In Hp.)	Type Comp. (Open or Hermetic)	Dimensions—Width Depth Height	C.F.M. Rating	Temp. Control	Heating Coil (Standard or Optional)
CU-3	3	Hermetic	36 27 48	1,200	Yes	Optional

Brunner & Comfotaire

American Coils Co., 360 Thomas St., Newark 5, N. J.

Model No.	Comp. Size (In Hp.)	Type Comp. (Open or Hermetic)	Dimensions—Width Depth Height	C.F.M. Rating	Temp. Control	Heating Coil (Standard or Optional)
BAC 20-1	2	Open	35½ 25½ 47½	800	Yes	Optional
BAC 30-1	3	Open	35½ 25½ 71	1,200	Yes	Optional
BAC 50-1	5	Open	44½ 26½ 76½	2,000	Yes	Optional
BAC 75-1	7½	Open	51½ 30½ 83½	3,000	Yes	Optional
BAC 100-1	10	Open	57 30½ 87½	4,000	Yes	Optional

Record Sales Reported By Airtemp --

(Concluded from Page 1, Column 5) rose 92% over the number shipped in the first quarter of 1952, and 10% higher than the number shipped in any first quarter in the 19-year history of Airtemp Div.

Unit shipments for the month of March were 25% higher than the most productive month in 1952. In

total shipment, March was the best business month ever experienced by Airtemp.

"Room air conditioners are moving at a tremendous pace," the Airtemp general sales manager declared. "In January, February, and March of this year we shipped 300% more units than we did in the first quarter of 1952," Knoff stated.

**ACCURATE...
RUGGED...
COMPACT...**

Bulletin 836 PRESSURE SWITCH

Available for pressures between 30-in. vacuum and 700 lb sq in. Metal bellows operate a reliable snap action precision switch, which has no levers, hinges, or pivots. Range and differential can be easily adjusted in the field. Also, see the Bulletin 837 Temperature Control. Write for full information. Allen-Bradley Co., 1313 S. First St., Milwaukee 4, Wis.



ALLEN-BRADLEY
QUALITY
MOTOR CONTROL

Odor Conference --

(Concluded from Page 1, Column 3)

The morning and afternoon sessions on Thursday, April 23, will be under the chairmanship of A. B. Hubbard, General Electric Co., Bloomfield, N. J., and Dr. Amos Turk, director of research, Connor Engineering Corp., Danbury, Conn.

The speakers will discuss the general theme of "Basic Types of Industrial Odor Problems," "Problems of Odor Research from the Viewpoint of the Scientist," and the "Odor Process, Status of Present Knowledge."

The Friday (April 24) sessions, under the chairmanship of Dr. Haldane Gee, director of bacteriology and toxicology, Foster D. Snell, Inc., New York City, and George W. Meek of ASHVE will cover the status of subjective and objective measurement techniques and experimental studies in odor.

Home Freezer Week --

(Concluded from Page 1, Column 4)

Leading off the week on Sunday, April 12, was a whole feature section in the Seattle Post-Intelligencer devoted to home freezers.

Four freezer shows, free to the public, were held during the week at the Civic Auditorium. Monday's show demonstrated how the freezer aids in planned entertaining. Tuesday's show was built around the theme, "With Planned Buying—Your Freezer Saves You Money."

Two shows were held Wednesday, one show was a matinee performance. One was held in the evening.

James B. Quinn Elected Governair Vice President

OKLAHOMA CITY — James B. Quinn of Chicago was elected vice president of Governair Corp. at a



James B. Quinn

meeting of the board of directors held recently at the factory offices here.

A graduate of the University of Oklahoma, Quinn joined Governair in 1939 and served in sales, production, and advertising capacities at the factory. He was in the Navy during World War II.

For the past two years, Quinn has been engaged in sales promotional work, with headquarters in Chicago. He will remain in Chicago for a time, giving special attention to promotion of the company's new packaged store-cooler type equipment.

These units, offered in 3, 5, and 7½-ton sizes with cleanable water-cooled condensers and direct-drive accessible hermetic compressors, were first introduced by Governair at the Air Conditioning Exposition held in Chicago earlier this year.

Free Ride to Store Offered

TORONTO, Ont., Can.—Regal Television & Appliances has opened at 738 St. Clair Ave. West. To pull traffic during the formal opening, the store offered free transportation to shoppers from any point in the city.

RACCA Data --

(Concluded from Page 1, Column 3)

required to have refrigeration contractor licenses to install air conditioning in their cars and the city will have to make inspections.)

RACCA said the national office "recognizes the danger that may be involved in setting a precedent in the Detroit area and it may well serve as a pattern for the nation."

"It is the intention of the national office to have a representative sit in at the next meeting between the Automobile Manufacturers Association and the representatives of the Detroit RACCA group."

In addition to laying plans at the Chattanooga meeting for publication of operating data, RACCA's directors added new names to the membership roster and welcomed a new local association in Richmond, Va., into the national association.

Plans were also formulated for the Cleveland convention. Program Chairman E. W. Farr was appointed to carry out the plans set forth at the board meeting. Reservations have been made for Nov. 8-11 at the Carter hotel in Cleveland for this event.

Membership was another matter discussed by the board. A program was outlined to bring RACCA's membership to an all-time peak.

The educational exhibit and conference to be held in Seattle April 24-26 was brought to the attention of the board, which was asked to publicize the event.

JUST ASK US!

Turn to "What's New" Page for useful information on new products.

*This is a "D" nut
a fine point of quality*

A small part . . . but an important one. Another assurance that Bush Unit Coolers are the finest available.

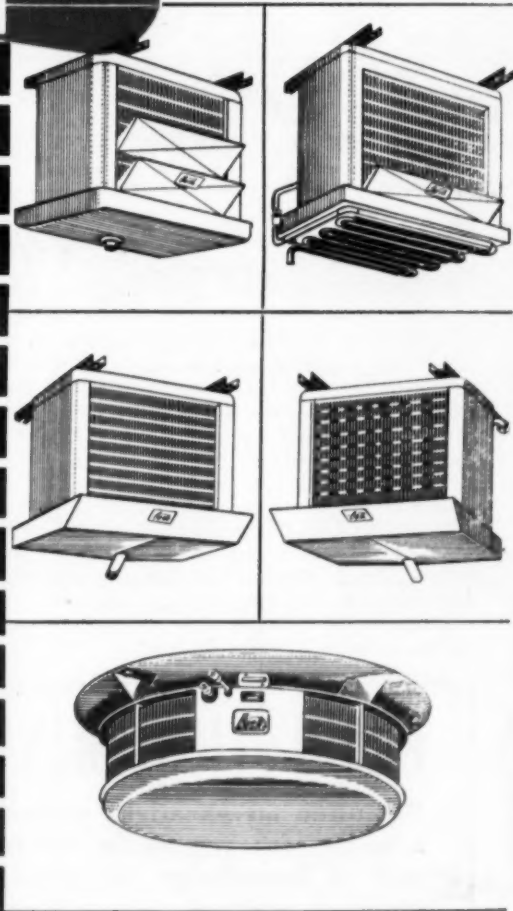
On ordinary unit coolers, sheet metal screws are used to join pan to case. Bush units are constructed with "D" nuts threaded to take small bolts. These "D" nuts are hydraulically riveted to the sheet metal. Result: a connection that doesn't loosen.

Remove the pan and replace it as often as you like. The connection will remain snug . . . free from annoying, noisy vibration.

The "D" nut . . . another fine point typical of Bush quality construction.

FEATURES OF BUSH UNITS:

- Modern Styling and Attractive Finish
- Rigid Case Construction
- Full Drain Pan on All Units
- Accurate Ratings . . . Insuring Economy of Operation, Proper Humidity Control
- Full, Deep Plenum Chambers
- Underwriters Laboratory Approval of All Units
- CJ and WJ Lines Feature Air DRAWN THROUGH the Coil Rather than Blown Out Across the Coil. This Eliminates Blowing Condensation from the Outer Edge of the Coil onto the Product or Box
- Heat Interchangers Furnished on Most Models



BUSH MANUFACTURING COMPANY

WEST HARTFORD 10, CONNECTICUT